

County Borough



of Blackburn.

# ANNUAL REPORT

UPON THE

## Health of Blackburn

For the Year 1931,

BY

V. T. THIERENS, M.B., Ch.B. (L'pool), D.P.H. (Cambridge),

MEDICAL OFFICER OF HEALTH,

ADMINISTRATIVE TUBERCULOSIS OFFICER,

MEDICAL SUPERINTENDENT OF THE CORPORATION ISOLATION HOSPITALS

AND MUNICIPAL MATERNITY HOME,

SCHOOL MEDICAL OFFICER.

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BLACKBURN:

THOMAS BRIGGS (BLACKBURN) LTD., 73 NORTHGATE.



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# Health and Housing Committee.

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THE MAYOR (WILLIAM KENYON, Esq., J.P.).  
ALDERMAN F. J. GREEVES, J.P., L.R.C.P., CHAIRMAN.

## ALDERMEN—

BURKE, FISH, HEYES (CHAIRMAN HOUSING SUB-COMMITTEE), JOHNSON  
AND GRIMSHAW.

## COUNCILLORS--

AINSWORTH	DOWDALL	LEAVER
BEARDWOOD, H.	EASTWOOD	McLEOD
BLACKSHAW	GREENWOOD	MARSDEN
CAMPBELL	HAMMOND	RILEY
COTTON	HOLDEN, B. (VICE-CHAIRMAN).	SHORROCK
CRITCHLEY	HURLEY	WORDEN.

With the Addition of the following :—

### FOR MATERNITY AND CHILD WELFARE PURPOSES :

MESDAMES BOLTON, J. COTTON, HATTON, A. MATHERS-SMETHURST,  
W. TATTERSALL, B.Sc., WALSH, Miss HOWARD AND Miss DEAN.

### FOR HOUSING PURPOSES :

MESDAMES BOLTON, BUCKLEY, BYRNE, F. HARRISON, HOBKIRK, R. SUGDEN  
AND Miss CAMPBELL.



# Public Health Officers of the Local Authority.

---

## **Medical Officer of Health—**

V. T. THIERENS, M.B., CH.B., D.P.H.

## **Deputy Medical Officer of Health and Tuberculosis Officer—**

I. M. McLACHLAN, M.D., B.S., B.H.Y., D.P.H.

## **Assistant Medical Officers of Health—**

Miss ELLA G. F. MACKENZIE, M.A., M.D., CH.B., D.P.H.  
(Resigned July, 1931).

J. W. HUNTER, M.D., CH.B., B.H.Y., D.P.H.  
(Resigned August, 1931).

A. D. GORMAN, M.R.C.P. (Edin.), F.R.F.P.S. (Glas.), D.P.H.  
(Commenced December, 1931.)

DOROTHEA I. BAIRD, M.B., CH.B. (Edin.), D.P.H. (Commenced August, 1931).

## **Dental Surgeons—**

H. YATES, L.D.S.

E. POULTER, L.D.S. (Resigned March, 1931).

J. GREENHALGH, L.D.S. (Commenced May, 1931).

## **Part Time Medical Officers—**

W. BRIGGS, M.B., B.S. (Orthopaedic Surgeon).

R. Y. AITKEN, F.R.C.S. (Puerperal Fever Consultant).

J. WISHART, F.R.C.S.E. (Oculist and Laryngologist).

W. CRAN DUTHIE, M.B., C.M. (M.O. i/c Male Venereal Diseases Clinic).

N. J. BARTON, M.D., D.M.R.E. (Radiologist). (Resigned, June, 1931).

## **Pathologists—**

Pathological work is carried out by the Pathologists at the Blackburn and East Lancashire Royal Infirmary and the Manchester and Liverpool Public Health Laboratories.

## **District Medical Officers—**

J. T. T. RAMSAY, L.R.C.P., L.R.C.S., J.P.

D. O'DRISCOLL, M.B., CH.B., B.A.O.

C. M. BRADLEY, L.R.C.P., L.R.C.S.

J. W. KEIGHLEY, M.B., CH.B.

ARTHUR LEIGH, M.B., CH.B.

## **Public Vaccinators—**

J. T. T. RAMSAY, L.R.C.P., L.R.C.S., J.P.

D. O'DRISCOLL, M.B., CH.B., B.A.O.

C. M. BRADLEY, L.R.C.P., L.R.C.S.

J. W. KEIGHLEY, M.B., CH.B.

G. A. FLEMING, M.B., CH.B.

D. KELLEHER, M.B., CH.B., B.A.O.



## Public Health Officers of the Local Authority—*Continued*

### Public Analyst—

W. H. ROBERTS, M.Sc., F.I.C.

### Veterinary Inspector and Chief Meat Inspector—

E. J. BURNDRED, M.C., M.R.C.V.S., D.V.H.

\*H. KENYON, Chief District Sanitary Inspector.

\*W. H. GOODMAN, Assistant Meat Inspector.

\*O. H. WILLIAMS, Special Inspector for Food and Drugs, etc.

### District Inspectors—

\*J. W. MARGINSON.      \*W. WALNE.      \*H. W. FOWLER.

\*J. A. SHAW.      \*J. MARGINSON.

### Lady Health Visitors—

§†\*Miss LOWE.      §\*Miss STANANOUGHT.      §††Miss BELL.

§††Miss CATLOW (Resigned August, 1931).

§††Miss GOODMAN.      †‡§Miss SUDWORTH.      Miss TAYLOR (Commenced, 1/9/31).

§††Miss BENTHAM (Commenced 9/2/31; Resigned 1/8/31).

§††Miss FRANKS. (Commenced 2/11 31).

**Matron, Corporation Hospital—**§††Miss CRITCHLEY.

**Matron, Springfield Maternity Home—**§††Miss BAMBRIDGE.

**Tuberculosis Nurse—**§‡Mrs. FOSTER.

**Chief Clerk—**THOMAS FOWLER.

### Clerks—

§H. WALSH. \*J. R. MARSDEN. Miss E. COMBERBACH. Miss C. HAWORTH.

\*§W. PARKER. (Resigned September, 1931).      §C. AINSWORTH.      J. MATHER.

§H. ROTHWELL.      F. BRIGGS.

**Vaccination Officer—**G. G. DICKINSON.

### Disinfectors—

F. HOLDEN.      J. SLEVIN.

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\*Holders of Certificates of the Royal Sanitary Institute.

†Certificated Midwives.

‡Trained Nurses.

§A contribution to the salaries of these Officers is made from Exchequer grants.

# CLINICS.

NAME.	PURPOSE.	WHERE HELD.	TIMES.
Inspection Clinic.	Special Examination of Cases Referred by Teachers, School Attendance Officers and School Nurses.	68, Victoria Street.	Wednesdays, 2 p.m. Saturdays, 9-30 a.m.
Ophthalmic Clinic.	Prescription of Spectacles.	68, Victoria Street.	Mondays, 1-30 p.m. Fridays, 1-30 p.m.
Dental Clinic.	Dental Treatment.	"	Every week day by appointment.
Minor Ailments Clinic.	Treatment of Minor Diseases of Skin, etc.	68, Victoria Street.	Every week day, at 8-45 a.m.
"	"	All Saints' School, Bolton Road.	Mondays to Fridays at 2-0 p.m.; Saturdays, 9-0 a.m.
Cleansing Station	Treatment of Scabies and Cleansing of Verminous Cases.	Throstle Street.	Tuesdays and Thursdays (by appointment).
Throat Clinic.	Operative Treatment of Adenoids and Enlarged Tonsils.	Blackburn and East Lancs. R. Infirmary.	Arranged as required.
"	" (In-Patients).	Queen's Park Hospital.	Arranged as required.
Remedial Exercises.	Treatment of Deformities.	68, Victoria Street.	Every week-day (by appointment).
Tuberculosis Clinic.	Diagnosis and Treatment of Tuberculosis.	Dispensary, Duke Street.	Every week-day (except Thursday), at 2 p.m. Tuesday, 7-0 p.m.
Orthopædic Clinic.	Supervision of Cripples, etc.	68, Victoria Street.	Third Friday in each month, at 4-0 p.m.
Maternity and Child Welfare Centres.	Child Welfare.	Princes Street P.M. School.	Monday, 2-0 p.m.
	"	Kendal St. School.	Monday, 2-0 p.m.
	"	Hozier St. School.	Tuesday, 2-0 p.m.
	"	Cornelian St. Institute.	Tuesday, 2-0 p.m.
	"	All Saints' Sch. Bolton Road.	Wednesday, 2-0 p.m.
	"	Hozier St. School.	Thursday, 2-0 p.m.
	"	Kendal St. School.	Thursday, 2-0 p.m.
	"	Griffin Parochial Hall	Friday, 2-0 p.m.
Ante-Natal Clinic.		66, Victoria Street.	Wednesday and Friday, at 10-0 a.m.
Special Ante-Natal Clinic.	(V.D.)	"	Tuesday, 10-0 a.m.
Strabismus Clinic.	Correction of Squint in infants under school age.	"	By special appointment.
Venereal Diseases Clinics.	(V.D.)	Royal Infirmary.	Men : Tuesday, 5-30 p.m. Friday, 6-0 p.m. Women : Monday, 5-30 p.m. Thursday, 6 p.m.
Ultra-Violet Light Clinic	Artificial Light Treatment.	Corporation Hospital.	Mondays, Tuesdays, Thursdays & Fridays, 2 p.m.
"	"	66, Victoria St.	Every week-day by appointment.
X-Ray Clinic.	X-Ray Examinations.	"	By appointment.
Diphtheria Immunisation Clinic.	Prevention of Diphtheria.	68, Victoria Street.	Monday, 10-0 a.m. Monday, 4-30 p.m. Thursday, 10-0 a.m.

PUBLIC HEALTH OFFICE,  
BLACKBURN,

*March, 1932.*

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I beg to present my Annual Report on the work of the Department during 1932, which has been compiled upon the lines indicated in Circular 1206, issued by the Ministry of Health in July, 1931.

The year witnessed a decline in the incidence of scarlet fever and diphtheria both of which diseases were milder in type than in previous years.

The extension to Ward III at the Corporation Hospital has been completed and full advantage has been taken of the additional isolation cubicles thereby provided.

Blackburn has for many years, notwithstanding the high standard of obstetrics as practiced locally, occupied an unenviable position as regards maternal mortality. This year, however, the Blackburn rate of 3·88 compares more than favourably with the corresponding rates for other industrial areas and for England and Wales as a whole.

As, however, the Blackburn Maternal Mortality Rate has been consistently high over a period of 40 years, and has further exhibited wide fluctuations year by year, it is not improbable that the reduction, though welcome, is in part fortuitous, and therefore unlikely to be maintained.

The infantile mortality rate of 61 per 1,000 births constitutes a record. This rate compares with one of 83·3 for 1930 and with one of 84·9, representing the average of the past 10 years.

My thanks are again due to the Staff of the Department for the energy and zeal with which they have discharged their duties throughout the year.

To you, Mr. Chairman, Ladies and Gentlemen, I wish to express my appreciation of the help and encouragement which you have accorded me.

I am,

Mr. Chairman, Ladies and Gentlemen,

Your obedient servant,

V. T. THIERENS.



*PART I.*

---

Vital Statistics  
*and*  
Social Conditions.



*Births*.—The births registered were 1,539, of which 65 were illegitimate. The total male births were 807, and female 732. The birth rate was 12·4 per 1,000, compared with 15·8 for England and Wales, and 16·0 for the 107 great towns.

TABLE 1.

<i>Year.</i>	<i>Birth Rate.</i>	<i>Death Rate.</i>	<i>Natural Increase</i> <i>1,000 Population.</i>
1904 . . . .	23·5	17·2	6·3
1914 . . . .	20·8	14·9	5·9
1920 . . . .	22·1	13·9	8·2
1921 . . . .	19·5	12·7	6·8
1922 . . . .	16·8	14·2	2·6
1923 . . . .	16·2	13·4	2·8
1924 . . . .	15·3	14·0	1·3
1925 . . . .	14·9	13·9	1·0
1926 . . . .	14·0	12·9	1·1
1927 . . . .	13·7	14·9	−1·3
1928 . . . .	13·8	12·2	1·5
1929 . . . .	12·4	14·9	−2·5
1930 . . . .	12·7	12·8	−0·08
1931 . . . .	12·4	12·8	−1·7

The death rate of Blackburn males was 14·4, and of females 13·8 per 1,000 living of each sex.

The decrease in the birth rate and a rise of 1·3 in the death rate result in a natural decrease of population of 1·7, compared with one of 0·08 in 1930.

*Marriages*.—There were 1,088 marriages solemnized during the year as follows : Established Churches, 464 ; other places of worship, 411 ; Register Office, 213.



TABLE 2.

WARD DEATH RATES IN RELATION TO PERSONS PER ACRE  
AND ROOM SPACE.

1921 CENSUS.

<i>Ward.</i>	<i>Death Rate.</i>	<i>Persons per Acre.</i>	<i>Rooms per Person.</i>
St. Stephen's .. .. .	17.1	9.5	1.08
Trinity .. .. .	13.9	59.1	1.05
St. Michael's .. .. .	12.1	14.4	1.10
St. John's .. .. .	12.0	71.1	1.13
St. Silas' .. .. .	14.9	9.1	1.50
St. Paul's .. .. .	14.8	79.5	1.12
St. Peter's .. .. .	15.5	50.5	1.05
St. Mary's .. .. .	16.6	31.8	1.02
St. Matthew's .. .. .	13.3	87.1	1.05
St. Thomas's .. .. .	12.3	7.0	1.28
Park .. .. .	12.9	14.6	1.08
St. Luke's .. .. .	14.6	45.1	1.03
St. Mark's .. .. .	12.5	25.9	1.13
St. Andrew's .. .. .	15.0	11.6	1.07

TABLE 3.

## DEATH RATES IN WARDS FOR THE PAST SIX YEARS.

<i>Ward.</i>	1926	1927	1928	1929	1930	1931	<i>Av. for 6 Years</i>
St. Stephen's ..	12.4	14.8	12.2	17.8	16.0	17.1	15.0
Trinity .. ..	11.8	18.1	13.2	14.1	12.5	13.9	13.9
St. Michael's ..	9.7	11.6	11.3	14.7	7.8	12.1	11.2
St. John's ..	12.4	13.4	12.3	11.8	13.4	12.0	12.5
St. Silas's ..	11.1	13.9	9.7	15.1	13.0	14.9	12.9
St. Paul's ..	14.1	13.3	14.2	15.7	13.7	14.8	14.3
St. Peter's ..	15.8	18.5	17.4	16.2	13.1	15.5	16.1
St. Mary's ..	22.6	21.1	14.6	18.1	19.0	16.6	18.6
St. Matthew's ..	12.1	13.8	9.8	12.6	11.9	13.3	12.2
St. Thomas's ..	12.3	14.2	10.8	15.7	12.4	12.3	12.9
Park .. ..	13.6	11.7	13.1	15.7	12.9	12.9	13.3
St. Luke's ..	13.6	16.1	11.7	15.2	11.6	14.6	13.8
St. Mark's ..	10.8	14.6	11.7	10.9	10.9	12.5	11.9
St. Andrew's ..	13.4	17.4	11.7	15.3	12.6	15.0	14.2
Borough .. ..	12.9	14.9	12.2	14.9	12.8	14.1	13.6

**TABLE 4.**  
VITAL STATISTICS DURING 1931.

Wards	Popula- tion	Births	Deaths	Birth- Rate	Death- Rate	Deaths under one year per 1000 Births	Death- rate from six Zymotic Diseases excluding Diarrhoea	Death- rate from Diar- rhoea	Death- rate from Bron- chitis & Pneu- monia	Death-rate from Pulmonary Tuberculosis	Death-rate from Non-Pulmonary Tuberculosis
ST. STEPHEN'S ... ..	10694	191	183	17.8	17.1	62	0.00	0.00	3.17	1.58	0.18
TRINITY ... ..	8673	105	121	12.1	13.9	76	0.11	0.00	2.53	0.92	0.00
ST. MICHAEL'S ... ..	8784	86	107	9.7	12.1	34	0.00	0.00	2.39	0.33	0.11
ST. JOHN'S... ..	7037	86	85	12.2	12.0	81	0.14	0.14	2.55	0.71	0.00
ST. SILAS'S... ..	8821	75	132	8.5	14.9	40	0.11	0.11	2.04	0.68	0.00
ST. PAUL'S... ..	9592	135	142	14.0	14.8	74	0.52	0.31	3.02	1.25	0.10
ST. PETER'S ... ..	6566	70	102	10.6	15.5	100	0.30	0.15	4.41	1.66	0.00
ST. MARY'S ... ..	5402	76	90	14.0	16.6	65	0.00	0.37	3.14	1.66	0.00
ST. MATTHEW'S... ..	9129	111	132	12.1	13.3	72	0.00	0.00	3.17	0.65	0.43
ST. THOMAS'S ... ..	11807	151	146	12.8	12.3	60	0.33	0.16	1.69	0.42	0.17
PARK ... ..	9280	106	120	11.4	12.9	38	0.10	0.00	2.80	0.32	0.10
ST. LUKE'S ... ..	7396	106	108	14.3	14.6	56	0.27	0.13	4.05	0.67	0.00
ST. MARK'S ... ..	10250	97	129	9.4	12.5	31	0.09	0.09	2.82	0.58	0.58
ST. ANDREW'S ... ..	10469	144	158	13.7	15.0	61	0.09	0.09	2.48	0.47	0.09
BOROUGH ... ..	123900	1539	1755	12.4	14.1	61	0.15	0.10	2.80	0.78	0.14

TABLE 5.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1931 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number	Nett.		Number	Ratio	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of Age		At all Ages.	
			Number	Rate					Number	Rate per 1,000 Net Births.	Number	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1921	129400	2538	2528	19.5	1753	13.5	157	59	276	109.1	1655	12.7
1922	129376	2207	2177	16.8	1983	15.3	190	50	215	98.7	1843	14.2
1923	129000	2121	2094	16.2	1878	14.5	191	49	210	100.2	1736	13.4
1924	129000	2013	1980	15.3	2013	15.4	250	47	167	84.3	1810	14.0
1925	126900	1948	1902	14.9	1973	15.5	251	45	186	97.7	1767	13.9
1926	124400	1802	1743	14.0	1795	14.4	240	61	156	89.5	1616	12.9
1927	124500	1764	1702	13.7	2128	17.0	327	63	131	77.0	1864	14.9
1928	125100	1803	1730	13.6	1758	14.0	275	52	139	80.3	1535	12.2
1929	125300	1637	1554	12.4	2102	16.7	305	74	125	80.4	1871	14.9
1930	125300	1683	1595	12.7	1911	15.2	345	39	133	83.3	1605	12.8
1931	123900	1690	1539	12.4	2045	16.5	349	59	94	61.0	1755	14.1

TABLE 6.

DEATHS REGISTERED DURING THE CALENDAR YEAR 1931 CLASSIFIED BY AGE AND CAUSE.

CAUSES OF DEATH.		Net Deaths at the subjoined ages of "Residents," whether occurring within or without the District.											Total Deaths whether of "Resi- dents" or "non- Residents" in Institutions in the District.
		All Ages	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 35 years.	35 and under 45 years.	45 and under 55 years.	55 and under 65 years.	65 years and upwards.	
1		2	3	4	5	6	7	8	9	10	11	12	13
All Causes	Certified .....	1740	91	31	23	28	60	68	105	211	330	793	864
	Uncertified .....	15	3	..	..	..	..	..	..	2	4	6	..
Enteric Fever .....		1	..	..	..	..	..	..	..	..	1	..	1
Small Pox .....		..	..	..	..	..	..	..	..	..	..	..	..
Measles .....		1	1	..	..	..	..	..	..	..	..	..	..
Scarlet Fever .....		..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough .....		15	8	5	2	..	..	..	..	..	..	..	5
Diphtheria and Croup .....		2	..	1	1	..	..	..	..	..	..	..	2
Influenza .....		52	3	..	1	..	2	6	3	7	9	21	4
Erysipelas .....		5	..	..	..	..	1	..	..	..	3	1	4
Tetanus .....		..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis .....		97	..	..	..	2	25	19	15	17	15	4	53
Tuberculous Meningitis .....		7	1	1	1	3	..	1	..	..	..	..	7
Other Tuberculous Diseases .....		11	1	..	..	..	3	1	2	1	3	..	15
Cancer, Malignant Disease .....		213	..	..	..	1	1	..	10	39	68	94	107
Acute Rheumatism and Rheumatic Fever .....		4	..	..	..	..	2	2	..	..	..	..	2
Cerebro-Spinal Meningitis .....		..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica .....		13	..	..	1	..	3	1	1	5	1	1	15
Other Forms of Meningitis (not T.B.) .....		11	2	2	..	1	..	2	1	..	1	2	11
Poliomyelitis .....		..	..	..	..	..	..	..	..	..	..	..	..
Locomotor Ataxy .....		..	..	..	..	..	..	..	..	..	..	..	..
General Paralysis of the Insane .....		3	..	..	..	..	..	..	2	..	1	..	1
Cerebral Hæmorrhage .....		59	1	..	..	..	..	1	2	4	16	35	13
Other Diseases of the Nervous Sys'm .....		76	2	2	..	3	1	1	4	16	18	29	49
Senile Decay .....		105	..	..	..	..	..	..	..	..	3	102	56
Organic Heart Disease .....		240	..	..	4	2	2	4	11	33	55	129	64
Arterio-Sclerosis .....		100	..	..	..	..	..	..	1	3	9	87	36
Aneurism .....		..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Circulatory System .....		5	..	..	..	..	..	..	1	1	1	2	..
Bronchitis, Acute .....		26	1	..	..	..	..	..	..	3	4	18	8
Bronchitis, Chronic .....		183	4	..	1	..	..	1	3	17	31	126	53
Influenzal Broncho Pnœumonia .....		15	..	..	1	..	1	..	4	5	2	2	4
Pneumonia (other forms) .....		124	21	15	4	3	4	8	15	10	17	27	37
Other Diseases of the Respiratory System .....		17	1	..	1	..	..	..	2	2	5	6	5
Diarrhœa and Enteritis .....		13	8	2	1	..	..	..	..	1	1	..	5
Appendicitis, Typhlitis and Peri- tonitis .....		7	..	..	..	2	3	..	1	1	..	..	12
Cirrhosis of the Liver .....		5	..	..	..	..	..	..	..	1	1	3	4
Alcoholism .....		1	..	..	..	..	..	..	1	..	..	..	..
Other Diseases of the Digestive Sys'm .....		51	1	1	..	1	..	3	6	13	13	13	75
Nephritis and Bright's Disease .....		75	..	..	..	1	2	3	4	12	18	35	31
Other Diseases of the Urinary Sys'm .....		15	..	..	..	..	1	..	..	2	5	7	17
Puerperal Fever .....		1	..	..	..	..	..	1	..	..	..	..	1
Puerperal Pyrexia .....		..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases and Accidents of Pregnancy and Parturition .....		5	..	..	..	..	..	3	2	..	..	..	12
Congenital Debility and Malforma'n .....		17	17	..	..	..	..	..	..	..	..	..	12
Premature Birth .....		21	21	..	..	..	..	..	..	..	..	..	6
Venereal Diseases .....		1	..	..	..	..	..	..	..	1	..	..	2
Other Diseases of the Reproductive System (Non-Malignant) .....		9	..	..	..	..	..	..	..	..	2	7	25
Violent Deaths (excluding Suicide).. ..		60	..	1	4	7	6	7	3	5	6	21	64
Suicide .....		25	..	..	..	..	2	..	5	6	8	4	6
All other Defined Diseases .....		64	1	1	1	2	1	4	6	8	17	23	40
Diseases Ill-defined or unknown .....		..	..	..	..	..	..	..	..	..	..	..	..
All Causes .....		1755	94	31	23	28	60	68	105	213	334	799	864



TABLE 7.

## CLASSIFICATION OF DEATHS ACCORDING TO DISEASE.

CAUSE OF DEATH.	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Death Rate.
Enteric Fever .....	..	..	1	..	1	2	1	..	..	2	1	0.008
Smallpox .....	..	..	..	..	..	..	..	..	..	..	..	0.00
Measles .....	3	32	6	20	28	3	36	..	..	23	1	0.008
Scarlet Fever.....	1	2	..	1	3	1	1	..	2	..	..	0.00
Whooping Cough .....	20	9	7	7	16	20	1	4	8	5	15	0.12
Diphtheria and Croup ....	6	7	1	3	8	8	11	14	18	9	2	0.01
Influenza .....	20	72	49	69	34	23	74	19	65	7	52	0.42
Erysipelas .....	2	1	2	1	..	1	7	..	3	3	5	0.04
Phthisis (Pulmonary Tuberculosis) .....	77	96	93	85	90	106	96	82	114	105	97	0.78
Tuberculous Meningitis ....	5	10	4	4	9	2	2	7	4	9	7	0.05
Other Tuberculous Diseases..	19	16	27	22	11	8	12	14	9	9	11	0.08
Cancer, Malignant Disease ..	175	163	177	184	160	166	160	163	192	185	213	1.71
Rheumatic Fever .....	2	..	..	..	2	..	5	2	2	3	4	0.03
Meningitis .....	13	15	10	11	18	9	5	14	18	8	11	0.08
Organic Heart Disease.....	214	221	166	204	211	198	269	334	315	279	240	1.93
Bronchitis .....	163	224	209	238	194	192	221	119	190	140	209	1.68
Pneumonia (all forms).....	133	173	189	199	176	112	175	152	201	142	139	1.12
Other Diseases of Respiratory Organs .....	19	29	22	21	15	20	27	25	29	28	17	0.13
Diarrhœa and Enteritis ....	47	26	24	15	12	15	24	8	8	9	13	0.10
Appendicitis and Typhlitis..	11	8	9	4	10	13	12	19	21	11	7	0.05
Cirrhosis of Liver .....	11	5	10	5	5	2	3	1	4	4	5	0.04
Alcoholism .....	1	..	..	..	..	1	1	..	..	..	1	0.008
Nephritis & Bright's Disease.	56	39	53	51	44	59	40	31	66	76	75	0.60
Puerperal Fever .....	6	1	5	3	4	7	3	1	2	..	1	0.008
Other Accidents and Diseases of Prognancy and Parturition .....	5	14	9	7	7	7	10	6	13	7	5	0.04
Congenital Debility and Malformation, including Premature Birth.....	104	98	100	59	68	76	66	71	57	75	38	0.30
Violent Deaths, excluding Suicide .....	46	43	36	49	46	52	60	50	72	57	60	0.48
Suicide .....	17	20	22	21	20	16	27	20	17	26	25	0.20
Other Defined Diseases ....	470	511	500	526	567	494	514	372	435	379	501	4.04
Diseases ill-defined or unknown .....	9	8	5	2	8	3	1	7	6	3	..	0.00
TOTAL.....	1655	1843	1736	1810	1767	1616	1864	1535	1871	1605	1755	14.16

*Deaths* :—The total number of deaths registered was 1,755, of which 822 were males and 933 were females. The death rate was 14·1 per 1,000, compared with 12·3 for England and Wales and 12·3 for the 107 great towns.

### CAUSES OF DEATH AND SICKNESS.

During 1931 the chief causes of death were as under :—

<i>Disease.</i>	<i>No. of Deaths.</i>		<i>Deaths per 1,000.</i>	
Organic Heart Disease ... ..	240	(270)	1·93	(2·22)
Pneumonia ... ..	139	(143)	1·12	(1·14)
Cancer ... ..	213	(185)	1·71	(1·48)
Bronchitis ... ..	209	(140)	1·68	(1·11)
Pulmonary Tuberculosis ... ..	97	(105)	0·78	(0·84)

*The bracketed figures represent the corresponding number for 1930.*

Organic heart disease again constitutes the chief cause of death, although the rate from this cause is lower than in 1930. For previous years the number of deaths from organic heart disease have been as under :—

<i>Year</i>	1931	1930	1929	1928	1927	1926	1925	1924
Number of Deaths ...	240	279	315	334	269	198	211	204

The deaths from Cancer numbered 213, as compared with 185 in 1930 ; 192 in 1929 ; 163 in 1928 ; 160 in 1927 ; 166 in 1926 ; 160 in 1925. There has been, therefore, no apparent definite increase in deaths from this cause during the past five years.

The Death Rates from Cancer per 1,000 of the population for the past 12 years are as under :—

1920	...	1·22	1926	...	1·33
1921	...	1·36	1927	...	1·28
1922	...	1·26	1928	...	1·30
1923	...	1·37	1929	...	1·53
1924	...	1·42	1930	..	1·48
1925	...	1·26	1931	..	1·71

TABLE 8.

DEATHS FROM CANCER OCCURRED AT THE FOLLOWING AGES :

<i>Age Period.</i>	<i>Male.</i>	<i>Female</i>	<i>Total</i>	<i>No. of popu- lation at this age period.</i>	<i>Number of deaths per 1,000 persons living.</i>
Under 25 years .. .. .	2	..	2	40887	0.04
25 and under 35 years .. ..	..	..	..	30851	0.00
35 .. 45 years .. ..	4	6	10	19452	0.51
45 .. 65 years .. ..	41	66	107	26020	4.11
65 years and over .. .. .	45	49	94	6690	14.05
	92	121	213	123900	1.71

TABLE 9.

SITES OF FATAL CANCER.

<i>Site.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
Tongue and Mouth .. ..	6	3	9
Oesophagus .. .. .	5	4	9
Stomach .. .. .	23	23	46
Liver .. .. .	4	6	10
Bowel and Abdominal ..	13	19	32
Rectum .. .. .	9	3	12
Bladder .. .. .	4	2	6
Hypo Pharynx .. .. .	1	1	2
Larynx .. .. .	3	—	3
Uterus .. .. .	—	26	26
Breast .. .. .	—	17	17
Ovary .. .. .	—	4	4
Pancreas .. .. .	2	5	7
Gall Bladder .. .. .	1	4	5
Bones .. .. .	6	3	9
Lung .. .. .	1	1	2
Male Genital Organs ..	9	—	9
Others .. .. .	5	—	5
TOTAL .. .. .	92	121	213



In Table 8 it will be noted that the number of deaths from Cancer per 1,000 living is higher in the older than in the younger age groups. The most rapid rate of increase takes place in the age group 65 and over, in which group the rate is 9·94 per 1,000 higher than in the 45–65 age group.

Diseases of bodily systems and group diseases to which death was assigned are as follows :—

<i>Disease.</i>	<i>No. of Deaths.</i>			<i>Deaths per 1,000.</i>	
Respiratory System (Non-Tubercular) ...	365	(311)	...	2·94	(2·48)
Circulatory System ... ..	245	(326)	...	1·97	(2·60)
Nervous System (Non-Tubercular) ... ..	162	(176)	...	1·30	(1·40)
Cancer ... ..	213	(185)	...	1·71	(1·47)
Tuberculosis (all forms) ... ..	115	(123)	...	0·92	(0·98)
Renal System (Non-Tubercular) ... ..	90	(91)	...	0·72	(0·71)
Infectious Diseases ... ..	76	(49)	...	0·61	(0·39)
Digestive Diseases ... ..	77	(56)	...	0·62	(0·44)
Diseases of Babyhood (under one year) ...	38	(75)	...	0·30	(0·59)
Diseases associated with Maternity ... ..	6	(7)	...	0·04	(0·05)

*The bracketed figures represent the corresponding number for 1930.*

## MORTALITY STATISTICS IN COTTON OPERATIVES.

The subjoined Tables are a continuation of those given in previous reports.

TABLE 10.

## RESPIRATORY DISEASES (NON-TUBERCULAR)

DEATH-RATES PER 1,000 EMPLOYEES (1921 CENSUS).

DEATHS.

DEATH RATES.

Age Period.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.						M.	F.					
Years														
15-25..	..	1	..	1	..	1	5	..	0.1	..	0.6	..	0.7	0.2
25-35..	3	..	..	..	..	..	9	2.3	..	..	..	..	..	0.4
35-45..	..	1	..	1	1	..	24	..	0.3	..	1.2	3.7	..	1.2
45-55..	2	4	..	1	..	2	37	2.0	2.3	..	1.9	..	4.8	2.3
55-65..	2	3	3	3	1	5	59	3.0	4.4	25.6	11.4	11.6	23.2	5.4
65 and upwards..	11	7	..	5	..	10	179	54.7	56.4	..	76.9	..	185.1	26.0
TOTAL .. ..	18	16	3	11	2	18	313	2.7	0.9	1.5	2.5	1.4	5.0	3.2

## PULMONARY TUBERCULOSIS.

Age Period.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.						M.	F.					
Years														
15-25..	2	7	1	..	1	1	25	0.9	0.9	1.3	..	1.8	0.7	1.1
25-35..	2	..	1	..	1	1	19	1.5	..	2.0	..	2.7	1.1	0.9
35-45..	1	..	1	..	..	1	15	0.8	..	2.7	..	..	1.4	0.7
45-55..	1	..	..	1	1	1	17	1.0	..	..	1.9	6.1	2.4	1.0
55-65..	1	..	..	1	..	..	15	1.5	..	..	3.8	..	..	1.4
65 and upwards..	..	..	..	1	..	..	4	..	..	..	15.3	..	..	0.5
TOTAL .. ..	7	7	3	3	3	4	95	1.1	0.3	1.5	0.6	2.1	1.1	0.9

TABLE 10—Continued.

## NON-PULMONARY TUBERCULOSIS.

DEATHS.													DEATH RATES.				
Age Period.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.			
	M.	F.						M.	F.								
Years																	
15-25..	1	1	..	..	..	..	3	0.4	0.1	..	..	..	..	0.1			
25-35..	..	..	..	1	..	..	2	..	..	..	0.9	..	..	0.09			
35-45..	..	1	..	1	..	..	2	..	0.3	..	1.2	..	..	0.1			
45-55..	..	..	..	..	..	..	1	..	..	..	..	..	..	0.06			
55-65..	..	..	..	..	..	..	3	..	..	..	..	..	..	0.2			
65 and upwards..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
TOTAL	1	2	..	2	..	..	11	0.1	0.1	..	0.4	..	..	0.1			

ALL OTHER DISEASES.														
15-25..	3	7	3	..	..	1	27	1.4	0.9	0.4	..	..	0.7	1.2
25-35..	2	6	..	1	2	..	38	1.5	1.2	..	0.9	5.5	..	1.8
35-45..	1	13	1	4	1	3	64	0.8	3.8	2.7	4.8	3.7	4.4	3.2
45-55..	7	13	2	6	2	6	158	7.0	7.6	8.8	11.9	12.2	14.5	9.8
55-65..	13	13	1	8	3	20	257	19.7	19.2	8.5	30.6	34.8	93.0	2.5
65 and upwards..	48	19	20	8	5	20	616	238.8	153.2	682.7	123.0	238.1	370.3	89.8
TOTAL	74	71	27	27	13	50	1160	11.7	3.9	13.8	6.2	9.0	13.9	12.0
GRAND TOTAL...	99	96	33	43	18	72	1579	15.7	5.3	16.9	9.8	12.6	20.0	16.4

TABLE 11.

## POPULATIONS, 1921 CENSUS.

Age Period. Years	Weavers.		Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.					
15—25.. . . .	2019	7009	723	1616	530	1329	21946
25—35.. . . .	1258	4892	490	1094	359	899	20876
35—45.. . . .	1151	3380	367	819	269	674	19878
45—55.. . . .	1000	1707	224	501	164	412	16052
55—65.. . . .	660	676	117	261	86	215	10647
65 and upwards.. . .	201	124	29	65	21	54	6866
TOTAL .. . . .	6289	17788	1950	4356	1429	3583	96265

## HOSPITAL ACCOMMODATION.

## (a) HOSPITALS MAINTAINED BY THE LOCAL AUTHORITY.

(1) *Infectious Diseases* :—

The Corporation Hospital, in Longshaw Lane, has accommodation for 60 fever patients. In time of undue prevalence of infectious disease, closure of Ward V, at present used as a Tuberculosis Pavilion, would provide 30 additional beds for fever cases, bringing the Fever bed accommodation to 86.

The extension to Ward III at the Corporation Hospital, which was completed during the year, provides four additional single bed cubicles for the reception of cases of infectious disease.

The Deputy Medical Officer of Health (who resides at the Corporation Hospital) is responsible to the Medical Officer of Health for the general administration of the Hospital. The services of specialists are available as required for consultation and for major operative work, with the exception of Tracheotomies which are performed by the Medical Officers of the Health Department.

(2) *Puerperal Fever and Pyrexia, Ophthalmia Neonatorum* :—

Cubicles are available in Ward III for the reception of selected cases of the above.

(3) *Small Pox* : -

The Finnington Hospital, which is situated three miles outside the Borough, has beds for the reception of 60 Small-Pox cases.

This Hospital is staffed as required from the Corporation Hospital.

(4) *Tuberculosis* :—

Sixty-four beds, for the reception of Tuberculous cases, are available at the Corporation Hospital.

Ten beds for the reception of early cases of Tuberculosis are retained by the Corporation at Meathop Sanatorium, Grange-over-Sands.

The Nursing Staff of the Corporation Hospital is as under :—

Matron	...	...	...	...	1
Night Sister	...	...	...	...	1
Day Sisters	...	...	...	...	3
Staff Nurses	...	...	...	...	6
Assistant Nurses...	...	...	...	...	11
Probationers	...	...	...	..	6

## HOSPITAL PATHOLOGICAL WORK.

The routine pathological work of the Hospital is undertaken by Medical Officers of the Health Department in the Hospital Laboratory. Particulars of the work done are given in Section IV of this Report.

(5) *Maternity* :—

The Municipal Maternity Home, Preston New Road, has accommodation for 20 cases.

The Nursing Staff of Springfield comprises a Matron (S.R.N., C.M.B.), one Sister (S.R.N., C.M.B.), two Nurses, both of whom hold the C.M.B., and three pupils who are State Registered Nurses.

Table 12 contains particulars of the Maternity Beds available at Queen's Park Hospital.



## QUEEN'S PARK HOSPITAL.

This Hospital, since its transfer from the Blackburn Board of Guardians to the Local Authority, on April 1st, 1930, has been administered by the Public Assistance Committee.

The medical staff comprises two residents and one stipendiary consultant surgeon. In addition, services of other consultants are obtained as required.

At the end of the year the Public Assistance Committee had under consideration a scheme for the appointment of a third Resident Medical Officer at the Queen's Park Hospital. This scheme has since been approved and a third resident appointed.

Facilities are available for major operative surgery ; in addition there are special departments for orthopædics, X-ray, ultra-violet light therapy, massage and dental work.

A new X-ray apparatus has been purchased and is installed in commodious premises, comprising X-ray room, waiting-room and dark room. The recommendations of the X-Ray and Radium Protection Committee have been carefully observed.

Routine pathological work is undertaken by a lay pathological assistant under the supervision of the Resident Medical Officers.

The Nursing Staff of the Hospital is as under :—

- 1 Superintendent Nurse, Trained State Registered Nurse, C.M.B.,  
Certificate in Ultra-Violet Light Therapy.
- 1 Sister Tutor, Trained State Registered Nurse, C.M.B.
- 1 Home Sister, Trained State Registered Nurse, C.M.B.
- 1 Night Superintendent Nurse, Trained State Registered Nurse,  
C.M.B.
- 1 Assistant Night Sister, Trained State Registered Nurse, C.M.B.
- 1 Charge Sister (for Ultra-Violet Light Treatment) Trained State  
Registered Nurse, C.M.B., and Certificate in Ultra-Violet  
Light Therapy.
- 12 Charge Sisters, Trained State Registered Nurses (seven with C.M.B.)
- 1 Staff Nurse, Trained State Registered Nurse.
- 66 Probationer Nurses.
- 10 Male Nurses.

The appended Table classifies the accommodation for the sick at the Queen's Park Hospital :—

TABLE 12.

Classification of Wards	Number of Wards	BEDS AVAILABLE.			
		Men	Women	Children	Total.
Medical ... ..	4	42	96	...	138
Surgical ... ..	2	37	25	...	62
Children... ..	3	...	...	135	135
Chronic Sick... ..	5	66	79	...	145
Tuberculosis ... ..	1	18	...	...	18
Maternity ... ..	1	...	26	...	26
Mental ... ..	2	76	95	...	171
<b>TOTAL ... ..</b>	<b>18</b>	<b>239</b>	<b>321</b>	<b>135</b>	<b>695</b>

The Hospital is a recognised training school for nurses.

#### (b) VOLUNTARY HOSPITALS.

The Blackburn and East Lancashire Royal Infirmary has accommodation for 240 in-patients. The beds are allotted as under :—

	<i>Males.</i>		<i>Females.</i>
General Medical ... ..	11	...	14
General Surgical ... ..	76	...	83
Children ... ..	14	...	13
Venereal Disease ... ..	2	...	2
Eye, Ear, Nose & Throat ...	11	...	14
<b>TOTAL ... ..</b>	<b>114</b>	<b>...</b>	<b>126</b>

Surgical tuberculosis and orthopædic cases are treated in the general surgical wards. Similarly cases of puerperal fever, pyrexia and ophthalmia neonatorum are received into the Hospital, although no special accommodation is provided for these cases.

Facilities are available for general medical and surgical work, and in addition there is a full range of special departments, including X-Ray and Radium-Therapy, Dental, Ophthalmic, Aural, etc.



Pathological work at the Hospital is undertaken by the Honorary Pathologist.

Co-operation obtains between the Royal Infirmary and the Local Authority whereby treatment (under the Local Authority's Scheme) of venereal disease and enlarged tonsils and adenoids is carried out at the Infirmary.

Full use has been made of the local Hospitals throughout the year, and, speaking in general terms, the hospital provision is adequate for the area.

### AMBULANCE FACILITIES.

(1) *For Infectious Cases :—*

The Local Authority provide Three Motor Ambulances.

(2) *For Non-Infectious Cases : -*

Three Motor Ambulances are available, one provided by the Watch Committee, one by the Joint Committee of the British Red Cross Society and the St. John Ambulance Brigade, and one by the Public Assistance Committee.

### PUBLIC ASSISTANCE.

I am indebted to Mr. G. B. Pye, Public Assistance Officer, for the appended particulars.

No. of residents in the County Borough in receipt of out-door relief :--

1st January, 1931	...	1333 families comprising 2326 persons.
1st July, 1931	...	1298 families, comprising 2304 persons.
1st January, 1932	...	1491 families, comprising 2807 persons.

No. of Blackburn persons relieved on the 1st January, 1932, in the--

Institution	...	...	...	...	793
Cottage Homes	...	...	...	...	70
Working Boys' Home	...	...	...	...	5

In addition there are a number of persons in the Institution, Cottage Homes and the Working Boys' Home who are chargeable to the Lancashire County Council.

Expenditure on out-relief to Blackburn persons during the 12 months ended 30th September, 1931 :--

Half-year ended 31st March, 1931	...	£17,460/9/3.
Half-year ended 30th Sept., 1931	...	£17,225/7/10d.

No. of Blackburn persons in Queen's Park Hospital on the 1st January, 1932, included in the 793 mentioned above	...	...	...	...	256
Average No. of Blackburn persons in the Cottage Homes during 1931	...	...	...	...	(per day) 69
Total number of Beds in the Institution, 1st January, 1932	...	...	...	...	1248
Total number of Inmates on the same day (including persons chargeable to the Lancashire County Council)	...	...	...	...	1006
Total number of Inmates of the Institution on the 1st January, 1932, who were suffering from sickness, accident, bodily or mental infirmity, including aged and infirm persons requiring regular nursing care or treatment	...	...	...	...	982
Total number of Sick Children on the 1st January, 1931	...	...	...	...	135
Admitted during 1931	...	...	...	...	182
Discharged during 1931	...	...	...	...	176
Died during 1931	...	...	...	...	32
Total number of Sick Children on the 1st January, 1932	...	...	...	...	109
Number of Beds available for Casuals	...	...	...	...	71

There has been no change in the administration of Poor Law Medical Out-relief since the service was transferred to the Local Authority.

The districts, with populations, are as under :—

<i>Districts.</i>	<i>Population 1921.</i>
St. Matthew's Ward	} .. ... 30868
Park Ward ...	
St. Thomas's Ward	
St. Luke's Ward ...	} ... ... 24062
St. Paul's Ward . .	
St. Peter's Ward	
St. Mary's Ward	} ... ... 25410
St. Stephen's Ward	
Trinity Ward ...	
St. John's Ward ...	} ... ... 25170
St. Michael's Ward	
St. Silas' Ward ..	
St. Andrew's Ward	} ... ... 21133
St. Mark's Ward	



*PART II.*

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Sanitary Circumstances.

## WATER SUPPLY.

The town is supplied with an upland surface water, which has been satisfactory, both as regards quality and quantity.

Typical reports of bacteriological and chemical examinations are appended :

## (a) CHEMICAL.

Colour : Brown Green. Turbidity : Trace.									
Oxygen absorbed at 27° C. in 4 hours in acid solution	...	...	...	...	...	...	...	...	0.134
"    "    "    in 3 mins. before incubation	...	...	...	...	...	...	...	...	—
"    "    "    "    after incubation	...	...	...	...	...	...	...	...	—
Free and Saline Ammonia	...	...	...	...	...	...	...	As NH <sub>3</sub>	0.0004
Albuminoid Ammonia	...	...	...	...	...	...	...	As NH <sub>3</sub>	0.0108
Nitrous Nitrogen	...	...	...	...	...	...	...	As NH <sub>3</sub>	<i>Nil.</i>
Nitric Nitrogen	...	...	...	...	...	...	...	As NH <sub>3</sub>	0.040
Chlorides	...	...	...	...	...	...	...	As Cl	1.05
Phosphates	...	...	...	...	...	...	...	As H <sub>3</sub> PO <sub>4</sub>	—
Hardness—Temporary	...	...	...	...	...	...	...	As Ca CO <sub>3</sub>	0.2
Permanent	...	...	...	...	...	...	...	As Ca CO <sub>3</sub>	2.3
Total	...	...	...	...	...	...	...	As Ca CO <sub>3</sub>	2.5
Reaction : Lacmoid, Neutral. Methyl Orange Alkaline Phenolphthalein Acid.									
Gases : Dissolved Oxygen.									
Action on bright lead foil in 24 hours	...	...	...	...	...	...	...	...	0.22
Metals : <i>Nil.</i>									
Action on Copper, 24 hours (Bright Copper Foil)...	...	...	...	...	...	...	...	...	0.09
All the numerical results are expressed in parts per 100,000.									

## (b) BACTERIOLOGICAL.

<i>Quantitative Analysis.</i>					<i>Average Results of Three Examinot's.</i>		
(a)	Aerobic micro-organisms growing in three days in nutrient gelatine at 20° C. to 21° C.				No. of colonies in one gramme (15.43 grains of water)		
	Non-liquefying bacteria	...	...	...	121	} Total 142	
	Liquefying bacteria...	...	...	...	21		
	Other micro-organisms	...	...	...	...		
(b)	Anærobic micro-organisms	...	...	...	...		
					<i>Quantity of water in which these bacteria were—</i>		
<i>Qualitative Analysis.</i>					<i>found</i>		<i>not found</i>
(a)	Bacteria associated with sewage or faecal pollution ... <i>Bacillus coli communis</i> ...				100 cc.	...	10 cc.
(b)	Bacteria associated with disease ...				...	...	...

The Blackburn Corporation supplies with water an approximate population of 140,000, with an average daily consumption of 27·83 gallons per head. The total average daily consumption is 3,896,835 gallons.

### HOUSING.

Number of houses completed and occupied on the various housing estates of the Council, together with the number under each Ministry of Health type, *e.g.*, parlour type, etc., since the last report :—

<i>Type</i>	<i>Burnley Road</i>	<i>Teak Street</i>
A. 3 Non-parlour, 3 bedrooms ...	98	30
A. 2 Non-parlour, 2 bedrooms ...	52	66
Houses and Shops ... ..	8	<i>Nil.</i>
	—	—
	158	96
	—	—

The rents of the various Corporation houses are as follows :—

Parlour, 3 bedrooms ...	18/2 and 17/4 per week.
Non-parlour, 3 bedrooms	17/4, 16/6, 16/3, 15/6, 14/1, 13/9, 12/8, 11/10.
Non-parlour, 2 bedrooms	12/4, 11/4, 10/6.
Flats, 2 bedrooms ...	9/6.

(*Inclusive of Rates.*)

Number of applicants for Corporation houses on the waiting list at the end of 1931 :—

Parlour, 3-bedroom type ... ..	<i>Nil.</i>
Non-parlour, 3-bedroom (large) ...	3
Non-parlour, 3-bedroom (small) ...	235
Non-parlour, 2-bedroom type ...	587

#### (a) STATISTICS.

#### 1. INSPECTION OF DWELLING-HOUSES DURING THE YEAR :—

(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)...	6097
(b) Number of inspections made for the purpose ... ..	14110
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 ... ..	1
(b) Number of inspections made for the purpose ... ..	1
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ... ..	1
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation... ..	2839

## 2. REMEDY OF DEFECTS DURING THE YEAR WITHOUT SERVICE OF FORMAL NOTICES :—

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	...	...	2182
---	-----	-----	------

## 3. ACTION UNDER STATUTORY POWERS DURING THE YEAR :—

### A. Proceedings under sections 17, 18 and 23 of the Housing Act, 1930 :

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	...	...	...	...	...	7
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—						
(a) By owners	...	...	...	...	...	5
(b) By local authority in default of owners	...	...	...	...	...	2

### B. Proceedings Under Public Health Acts :

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	...	...	...	...	...	318
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—						
(a) By owners	...	...	...	...	...	371
(b) By local authority in default of owners	...	...	...	...	...	...

### C. Proceedings Under sections 19 and 21 of the Housing Act, 1930 :

(1) Number of dwelling-houses in respect of which demolition orders were made	...	...	...	...	...	...	1
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders	...	...	...	...	...	...	0

### D. Proceedings Under section 20 of the Housing Act, 1930 :

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made...	...	...	...	...	...	0
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	...	...	...	...	...	0

### E. Proceedings under section 3 of the Housing Act, 1925 :

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	...	...	...	...	...	0
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—						
(a) By owners	...	...	...	...	...	0
(b) By local authority in default of owners	...	...	...	...	...	0
(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	...	...	...	...	...	0



*F. Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925 :*

(1) Number of dwelling-houses in respect of which Closing Orders were made	...	...	...	...	...	...	...	0
(2) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit	...	...	...	...	...	...	...	0
(3) Number of dwelling-houses in respect of which Demolition Orders were made	...	...	...	...	...	...	...	0
(4) Number of dwelling-houses demolished in pursuance of Demolition Orders	...	...	...	...	...	...	...	0

During the year 264 houses have been completed and occupied. Two hundred and fifty-four of these have been erected by the Local Authority for the purposes of Part III of the Housing Act, 1925, and the remainder have been erected by private enterprise.

(b) HOUSING CONDITIONS.

Blackburn, compared with many other industrial towns, is fortunate in the general housing of its inhabitants. The two or three-roomed type of house is in the minority; the Census, 1921, gave the number as 2,125, which is equivalent to 6.3% of houses inhabited at the end of 1930. The four to five-roomed type of house makes up the majority.

The most usual defects discovered in the course of routine housing inspections are: (1) Dampness, due to defective roofs, pointing, etc.; (2) defective water-closets; (3) Defective sash-cords and frames; (4) defective plaster and floors, cracked ceilings.

BYE-LAWS RELATING TO HOUSES.

The Bye-Laws in force in the Borough and relating to houses have been recently revised and are adequate.

HOUSES LET IN LODGINGS.

The register contains particulars of 77 houses let in lodgings, with a total of 482 rooms, which provide accommodation for approximately 900 individuals.

During the year 25 notices, containing a total of 185 breaches of the bye-laws, have been served upon the owners. The requirements of the notices have been complied with.

The vigorous policy pursued by the Health Committee in respect of the house-let-in-lodgings has been fully justified by the results achieved. At the end of the year all houses (to the number of 56) of which the occupiers are owners complied with the bye-laws, although in 1928 only one did so.

The Committee have now decided to take action in respect of those houses of which the occupiers are not owners, and, at the time of writing this Report, 10 notices have been served in respect of such houses.

Although enforcement of the bye-laws can do much to ameliorate the lot of those who, through circumstances beyond their own control, are forced to exist in houses let in lodgings, the powers conferred by our local bye-laws are inadequate for the satisfactory control of this trade. The extortionate rents demanded by the landlords inflict such hardship upon the tenants that in many cases after rent is paid the tenant is left with only just sufficient money to provide the barest essentials of life. The house let in lodgings constitutes probably the greatest evil of the Blackburn housing problem. This particular problem is to be solved only by means of special legislation having as its object the control of the iniquitous rents charged, together with an all-round improvement of the so-called accommodation provided.

### COMMON LODGING HOUSES.

There are 19 Common Lodging Houses in the Borough, which provide accommodation for 733 persons.

In all these houses the domestic conveniences are of a much higher standard than those provided at the majority of houses let in lodgings. Facilities for the storing and preparation of food, for personal ablution, etc., are in most cases satisfactory.

The bye-laws relating to these premises are adequate.

### TENTS, SHEDS, CARAVANS, ETC.

At the end of the year there were 57 caravans in the Borough used as human habitations.

Constant sanitary survey is necessary if the caravans and their surroundings are to be kept in a cleanly and sanitary state.

During the year 365 visits were paid to this class of dwelling, the majority of which were maintained in a sanitary state.

The general cleanliness of the travelling vans which came to Blackburn during the Easter holidays was satisfactory.

The bye-laws in force are adequate.

### UNDERGROUND SLEEPING ROOMS.—Housing Act, 1925, Section 18 (1).

There are no underground sleeping rooms known to the Department.

## CANAL BOATS ACTS, 1877 and 1884.

Ninety-nine boats were inspected during the year. There are 51 boats on the register. One boat has been re-registered, owing to a change of owner.

Five infringements of the Acts have been detected as follows :—

- (a) Master without certificate ; also boat not marked.
- (b) Master without a certificate.
- (c) Conversion of horse-drawn boat to motor-boat rendered certificate void ; also boat not marked.

Three statutory notices have been served notifying the owners of the infringements, and the requirements have been carried out. No case of infectious disease occurred, and there has been no detention of boats for cleansing or disinfection.

## OFFENSIVE TRADES.

The number of offensive trades within the Borough is 30, of which 18 are bone, and rag and bone dealing, four are fat extraction or fat rendering, two are gut-scraping, four are tripe-boiling, and two knackerings.

Nuisances arising in connection with offensive trades are influenced by the amount of care exercised in the storage of the raw material and waste products. Careless methods of storage and production have been responsible for the majority of nuisances reported, and attention paid to these details has resulted generally in abatement of the nuisance complained of.

During the year one offensive trade (bone-dealer) has been registered. Approval was given subject to the provision that fresh bones only were used.

## SANITARY ACCOMMODATION.

1.—*Sanitary Accommodation* :—

Privies	...	...	.	..	...	...	...	...	1
Pail Closets	...	...	...	...	...	...	...	...	127
Slop Water Closets	...	...	...	...	...	...	...	...	2156
Fresh Water Closets	...	..	...	...	...	...	...	...	38516

*Conversions :—*

Pails by Owners	...	...	..	...	...	...	...	3
Pails by Corporation	...	...	...	...	...	...	...	0
Tipplers by Owners	...	...	...	...	...	...	...	35
Tippler by Corporation	...	...	.	...	...	...	...	1
Wet Pits by Owners	...	...	...	...	...	...	...	11
Privies to Pails	...	...	...	...	...	...	...	11

2.—*New Sewers :—*

12-in. diameter	...	...	...	...	...	...	90 lin. yards
9-in. diameter	...	...	...	...	...	...	1484 lin. yards
6-in. diameter	...	...	...	...	...	...	109 lin. yards
21-in. diameter	...	...	...	...	...	...	151 lin. yards

3.—*Lavatory and Urinal Accommodation :—*

This is the same as last year.

4.—*Collection of Refuse :—*

					<i>Loads.</i>	<i>Tons.</i>	<i>Cwts.</i>	<i>Qrs.</i>
House Refuse	...	...	...	...	15306	25700	3	0
Market Refuse	...	...	...	...	766	940	5	0
Midden Refuse	...	...	...	...	1	1	5	0
Shop and Trade Refuse	...	...	...	...	854	824	2	0

5.—*Ashpit Conversions :—*

No. of Ashpits Abolished	...	...	...	...	...	...	2
No. of Bins substituted in lieu of same	...	...	...	...	...	...	2

*Approximate :—*

No. of Ashbins in use...	...	...	...	...	...	...	33650
No. of Dry Ashpits in use	...	...	...	...	...	...	13
No. of Wet Ashpits in use	...	...	...	...	...	...	1
No. of Excreta Pails in use	...	...	...	...	...	...	153
No. of Tanks in use	...	...	...	...	...	...	9

The arrangements for the removal of house, etc., refuse, and for scavenging in general are satisfactory.

## NEW OUTFALL SEWER SCHEME.

I am indebted to the Borough Engineer for the appended particulars respecting the new Sewage Scheme :—

The objects of the Scheme can briefly be given as bringing the combined capacities of the outfall sewers which carry the sewage and storm water sewage from the town to the Sewage Disposal Works to six times the daily dry weather flow, with due allowance for future increase of population.

This will meet the requirements of the Ministry of Health in this respect, and it is the first part of a comprehensive scheme for remodelling the main drainage system of the Borough.

The main facts about the conduit are that it consists mainly of 48-in. diameter concrete tubes, laid at a uniform gradient of 1 in 1,125, capable of carrying  $24\frac{1}{2}$  million gallons per day.

At several points where the conduit is above the level of the ground it is carried on piers in the form of a reinforced concrete bridge, and at Alum Scar, where the invert is 100-ft. above the bed of the stream, it is carried by a reinforced concrete arch of 180-ft. span.

The estimated cost of the work is £155,000, towards which a grant is being made by the Unemployment Grants Committee.

### SANITARY INSPECTION OF THE AREA.

The appended Tables classify, in tabular form, inspections carried out by the Sanitary Inspectors during the year, their findings and actions taken in respect thereof.

**TABLE 13.**

#### INSPECTION WORK.

	1931
No. of Complaints by Inhabitants .. .. .	365
No. of Complaints referred from other Departments .. .. .	108
No. of Special Inspections for suspected nuisances .. .. .	20

#### *No. of Nuisances Discovered as Result of:—*

Complaints by Inhabitants .. .. .	936
Visiting Cases of Infectious Diseases .. .. .	55
Complaints from other Departments .. .. .	186
Notifications of H.M. Inspector of Factories .. .. .	3
Routine Inspection Visits .. .. .	2625
Housing and Town Planning Inspections .. .. .	1697
 Total number of Defects found .. .. .	 5502
Total number of Defects remedied .. .. .	5664
No. of Informal Notices Served .. .. .	2862
No. of Formal Notices Served .. .. .	325
No. of Informal Notices complied with .. .. .	2182
No. of Formal Notices complied with .. .. .	319
No. of Interviews .. .. .	534
No. of Letters sent out .. .. .	107

Sanitary improvements made and defects remedied under the supervision of the Sanitary Inspectors:—



TABLE 14.

DWELLING HOUSES.		ICE CREAM MANUFACTORIES.	
Insufficient closet accomodation	8	Cloansing and limewashing	104
Water supply improved	—	Sanitary conditions improved	28
Cleansed and limewashed	95		
Overcrowding abated	7		
Damp and defective house, walls, roofs, etc.	776		
Defective gutters and down-spouts	800	SCHOOLS.	
Cleansing dirty floors	43	Playgrounds—repairs to drains	—
"    "    woodwork	3	"    repairs to asphalte.	—
"    "    dirty yards	101	"    repairs to paving	—
"    "    bedding	3	"    repairs to flags	—
"    "    windows	—	Urinals repaired or improved	2
"    "    gully traps	57	Sanitary accommodation repaired or improved	—
"    "    cellar areas	2		
Obstructive buildings removed	4		
Defective sink waste pipes	146	WORKSHOPS & WORKPLACES.	
Defective dishstones	21	Cleansed and limewashed	27
Waste pipes disconnected from drain	—	Provided with sufficient sanitary accommodation	—
Yards and passages reflagged	1	Sanitary condition improved	—
Flooding of houses	—	Ventilation improved	—
Yards badly paved or flagged	121	Overcrowding abated	1
Insufficient ventilation of rooms	8	Drains repaired	—
Defective chimney flues	37	Other nuisances abated	—
Window sash frames, cords, internal walls, ceilings, floors, stairs, fireplaces, doors, cupboards to be repaired	1224		
Dangorous and defective chimney stacks	89	DRAINS.	
Fractured internal walls	19	Re-layed	28
Gas pipes repaired	17	Cleansed or repaired	274
Water pipes repaired	141	Intercepting traps provided	—
Yard division walls	77	Soil pipes repaired	2
Defective and bulging external walls	127	Self-cleansing gullies provided	34
Dry rot	—		
Outbuildings repaired	162		
BAKEHOUSES.		WATER CLOSETS.	
Cleansed and limewashed	57	Cleansed	110
Sanitary accommodation improved	—	Repaired	102
Drains repaired	—	Cisterns and flushing fittings repaired	299
Animals removed	—	Provided in substitution of slop-water closets	8
Other nuisances abated	4		
DAIRIES, COWSHEDS, AND MILKSHOPS.		PAIL CLOSETS.	
Reconstructed	1	Nuisance abated	—
Dairy	—	Converted from privies	—
Middensteads	—		
Floors repaired	6	OFFENSIVE TRADES PREMISES.	
Improved Lighting	—	Limewashed	30
Improved ventilation	—		
Improved drainage	—		
Cubic space increased	—	COMMON LODGING-HOUSES.	
Internal walls and ceilings repaired	6	Cleansed and limewashed	38
Improved yard space	—	Other nuisances abated	18



TABLE 14—(Continued).

OFFENSIVE ACCUMULATIONS.		ASH RECEPTACLES.	
Removed .....	133	Repaired .....	—
ANIMALS KEPT AS TO BE A NUISANCE.		Portable receptacles provided....	269
Nuisances abated .....	17	STABLE PREMISES.	
SEWERS.		Removing manure .....	20
Cleansed.....	28	Reconstructed middensteads ....	—
SLOP-WATER CLOSETS.		HOUSES LET IN LODGINGS.	
Nuisances abated .....	28	Nuisances abated .....	32
Converted to W.C.'s .....	8	CANAL BOATS.	
ASHPITS.		Cask for water provided .....	—
Abolished .....	137	Certificates renewed .....	—
		Leaky condition .....	1
		Repairing and Painting .....	—
		Masters without Certificates ....	2
		Unsuitable Certificates .....	—

## DETAILS OF INSPECTION WORK.

Schools.....	58	Dirty Houses .....	168
Tents, Vans, Sheds.....	365	Common Yards, Back Roads and Passages .....	9096
Factories .....	60	Infected Houses .....	2163
Workshops .....	914	Housing and Town Planning Acts...	4096
Workplaces .....	62	Fishmongers and Greengrocers....	625
Bakehouses—Ordinary .....	594	Ashes Receptacles .....	486
Underground .....	4	Food Preparing and Storing Places.	236
Cowsheds .....	380	Outworkers' Premises.....	7
Dairies and Milkshops .....	2160	Enquiries <i>re</i> Milk Supply .....	42
Ice Cream Premises .....	430	Dwelling Houses <i>re</i> Nuisances ....	5842
Offensive Trade Premises .....	150	Samples of—	
Fried Fish Shops.....	1011	Milk purchased for Sediment Test .....	608
Common Lodging Houses .....	716	Milk purchased for Bacterio- logical Examination .....	29
Stable Premises .....	924	Milk purchased for Bacterio- logical content.....	273
Offensive Accumulations .....	133	Labelling of Condensed Milk Tins.	924
Animals so kept as to be a nuisance	17	Insufficient Water Supply.....	28
Sewers .....	28	Miscellaneous .....	76
Street Gullies .....	96	Merchandise Marks Acts .....	599
Canal Boats.....	103		
Smoke Observations .....	220		
Theatres and Cinemas .....	81		
Houses Let-in-Lodgings.....	2983		

TABLE 15.

FACTORIES, WORKSHOPS AND WORKPLACES.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

PREMISES.  (1)	NUMBER OF		
	Inspections (2)	Written Notices (3)	Prosecutions (4)
FACTORIES ... .. (Including Factory Laundries)	60	5	...
WORKSHOPS ... .. (Including Workshop Laundries)	914	9	...
WORKPLACES ... .. (Other than Outworkers' premises)	6	..	...
TOTAL ... ..	980	14	...

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

PARTICULARS.	Number of Defects.			Number of offences in respect to which prosecut'ns were instituted.
	Found.	Remedied.	Referred to H.M. Inspector.	
	(2)	(3)	(4)	
(1)				(5)
<i>Nuisances under the Public Health Acts :—</i>				
Want of Cleanliness ... ..	2	2	...	...
Want of Ventilation ... ..	...	...	...	...
Overcrowding ... ..	...	...	...	...
Want of drainage of floors ... ..	...	...	...	...
Other Nuisances ... ..	1	1	...	...
<i>Sanitary Accommodation :—</i>				
Insufficient... ..	14	...	...	...
Unsuitable or defective ... ..	4	4	...	...
Not separate for sexes ... ..	—	—	...	...
<i>Offences under the Factory and Workshops Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101) ... ..	...	...	...	...
Other offences ... ..	7	7	1	...
(Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Trans- fer of Powers) Order, 1921.)				
TOTAL ... ..	28	14	1	...

## FACTORIES AND WORKSHOPS.

Tables 16 and 17 contain particulars of matters referred by the Factory Inspector and action taken by the Health Department in respect thereof.

### TABLE 16.

#### FACTORIES.

- (a) "Sanitary accommodation: Closets in yard unsuitable, owing to defective flushing arrangements, and are very dirty."  
Verbal notice given. The defects were remedied and the conveniences were cleansed and linewashed.
- (b) "No sanitary accommodation available. A pail (which was full of urine) used as urinal on first floor."  
Notice was sent, and a suitable sanitary convenience was arranged for.
- (c) "Limewashing not carried out during the past six months; the last registered date is 22/2/1931."  
Notice was sent and the limewashing was done at once.
- (d) "W.C. (recently installed) ventilates directly into the workroom."  
Notice was sent, and an intervening ventilated space was formed between the w.c. and the workroom.

### TABLE 17.

#### WORKSHOPS.

- (a) "Limewashing of bakehouse overdue—last carried out in April, 1930. The six-monthly period appears to have been neglected, as previous limewashings are at yearly intervals."  
Notice was sent and the limewashing was carried out without delay.

#### OUTWORKERS.

During 1931 seven lists of outworkers were received from four makers of wearing apparel. The lists contained the names of three contractors and eight workers. The premises were inspected and were found to be satisfactory.

## SMOKE OBSERVATIONS.

There are 181 factory chimneys in the town, 103 of which are provided with smoke preventing appliances. The types of appliances are as under :—

Proctor's Mechanical Stokers	..	..	..	..	..	75
Leach Mechanical Stokers	..	..	..	..	..	6
Bennis Mechanical Stokers	..	..	..	..	..	3
Hodgkinson Mechanical Stokers	..	..	..	..	..	3
Whittaker's Mechanical Stokers	..	..	..	..	..	1
G.S.E. Mechanical Stoker	..	..	..	..	..	1
Sirocco Fans	..	..	..	..	..	3
Super Heaters	..	..	..	..	..	7
Edgar Allen Green's	..	..	..	..	..	4

During the year 220 smoke observations were made, and in seven smoke was emitted in excessive quantities. In each instance the premises were visited by the sanitary inspectors, who gave verbal notice to abate, investigated the cause and advised as to prevention. In all instances this course of action has been sufficient to secure abatement.

The standards of smoke permissible from a factory chimney in Blackburn are as follows :—

One boiler..	..	..	..	4 minutes black smoke in the hour
Two boilers	..	..	..	5     „     „     „
Three boilers	..	..	..	6     „     „     „
Four boilers or more	..	..	..	7     „     „     „

# THE SANITARY CONDITION AND WATER SUPPLY OF SCHOOLS.

The following Table gives details of the Sanitary Accommodation provided at the Schools in the Borough :—

TABLE 18.

	School Population	Water Closets				Urinals		Pail Closets	No. of Children to each W.C.
		No of pedestal W.C.'s flushed with separate cisterns	No. of pedestal W.C.'s flushed with automatic cisterns	No. of trough closets together with No. of seats flushed	Automatically By Hand	No. with sparge pipes	No. without sparge pipes		
Accrington Road C. ....	551	27	..	..	..	18	..	..	20
Audley C. ....	726	39	..	..	..	20	..	..	18
Bank Top C. ....	314	2	..	..	12	6	10	..	23
Bangor Street C. ....	452	..	25	..	..	18	..	..	18
Blakey Moor Central ....	811	7	28	..	..	20	..	..	23
Cedar Street C. ....	363	18	..	..	..	16	..	..	20
Christ Church C.E. ....	569	..	15	6	5	7	8	..	22
Emmanuel C.E. ....	400	..	..	21	..	..	30	..	19
Furthergate C. ....	312	..	..	14	..	8	..	..	22
Four Lanes End C. ....	139	..	..	8	..	..	10	..	17
Griffin C.E. ....	309	2	12	..	..	10	6	..	22
Holy Trinity C.E. ....	432	1	16	..	..	..	15	..	25
Intack C. ....	411	20	..	..	..	12	..	..	20
Lower Darwen C. ....	105	..	..	9	..	..	5	..	12
Mill Hill C. ....	270	..	16	8	..	..	20	..	12
Moss Street C. ....	311	2	11	..	..	5	5	..	24
C. of E. Central ....	483	2	13	..	..	18	..	..	32
Park Road C. ....	412	13	..	..	..	..	5	..	32
Regent Street Special ....	14	2	6	..	..	3	..	..	2
St. Aidan's C.E. ....	288	12	4	..	..	..	10	..	18
St. Alban's R.C. ....	891	21	..	..	..	..	10	..	42
St. Alban's Higher Grade (Boys) ....	136	6	..	..	..	..	10	..	23
St. Anne's R.C. ....	757	3	..	20	..	..	9	..	33
St. Andrew's C.E. ....	197	..	..	11	..	..	6	..	18
St. Barnabas' C.E. ....	427	..	13	..	..	..	8	..	33
St. Bartholomew's C.E. ....	248	..	..	13	..	..	12	..	20
St. Gabriel's C.E. ....	138	..	..	7	..	..	4	..	20
St. James' C.E. ....	212	1	9	..	..	..	8	..	21
St. James' C.E. (Black-a-Moor) ....	93	..	3	4	..	8	..	..	13
St. James' C.E. (Guide) ....	104	..	..	10	..	2	6	..	11
St. John's C.E. ....	586	..	..	23	..	9	..	..	21
St. Joseph's R.C. ....	575	2	..	14	..	..	9	..	36
St. Luke's C.E. ....	291	..	14	..	..	..	9	..	21
St. Michael's C.E. ....	230	..	..	6	6	6	..	..	19
St. Matthew's C.E. ....	353	1	..	12	..	..	10	..	27
St. Mary's R.C. ....	527	1	..	10	..	4	4	..	48
St. Paul's C.E. ....	347	..	13	..	..	20	20	..	27
St. Peter's C.E. ....	259	15	..	..	..	..	15	..	17
St. Peter's R.C. ....	476	2	25	..	..	17	..	..	17
St. Stephen's C.E. ....	299	1	..	21	..	..	7	..	14
St. Silas' C.E. ....	349	..	16	..	..	6	6	..	22
St. Thomas' C.E. ....	528	..	12	..	..	..	12	..	44
Sacred Heart R.C. ....	128	1	..	8	..	2	2	..	15
Wensley Fold C.E. ....	268	2	8	..	..	12	..	..	27
Witton C.E. (Infants) ....	56	..	6	..	..	6	..	..	9
Roe Lee Park C. ....	263	17	..	..	..	18	..	..	15
<i>Juvenile Unemployed Training Centre Schools</i>									
Maudsley Street ....	106	1	..	9	..	8	..	..	10
Audley Range ....	109	..	..	13	..	9	..	..	8
TOTALS .....		221	265	247	23	288	274	..	..



Water at the Schools is drawn from the Corporation mains and is satisfactory as regards quantity and quality.

A sanitary survey of each school is made three times each year by the Assistant School Medical Officer, who reports thereon to the School Medical Officer who is also Medical Officer of Health. Any sanitary defects found are reported to the Education Authority, who take such action as may be necessary.

Absences from school due to sickness are reported to the School Medical Department through the School Attendance Officers.

Much valuable information regarding the existence of non-notifiable infectious disease has reached the Health Office through the agency of Head Teachers and School Attendance Officers.

Convalescents from infectious disease and contacts who have been excluded from school are not readmitted until the Head Teacher receives a clearance certificate issued by the Health Department or the private practitioner in attendance. Children convalescent from infectious disease are excluded from school for varying periods following discharge from hospital, or, in the case of children who have been nursed at home, following disinfection of the home. The period of exclusion depends upon the type of infectious disease.

A full survey of the health of the school-child is contained in the Annual Report on the work of the School Medical Service.

#### THE TESTING OF DRAINS.

No. of Smoke Tests	..	..	..	..	..	..	69
No. of Water Tests	..	..	..	..	..	..	120
No. of Colour Tests	..	..	..	..	..	..	162
Breaking Down	..	..	..	..	..	..	79
Inspections made while work was in progress	..	..					110
Total number of Defects found	..	..	..	..	..		97
No. of Informal Notices Served	..	..	..	..	..		93
No. of Formal Notices Served	..	..	..	..	..		8
No. of Defects Completed	..	..	..	..	..		78
No. of Defects outstanding at end of 1931	..	..	..	..	..		2



## THE RAG FLOCK ACTS, 1911 & 1928.

There is one premises in Blackburn where rag-flock is used. The flock is not manufactured locally, but is purchased under guarantee of Government Standard of Cleanliness.

The premises concerned have been visited in the course of routine district inspections.

One sample, taken under the above Acts, conformed with the standard of cleanliness.

## DISPOSAL OF THE DEAD.

The arrangements for the disposal of the dead will be adequate for at least a further ten years.

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*PART III.*



Food Supply.

## REPORT OF THE VETERINARY INSPECTOR

(MR. E. J. BURNDRED, M.R.C.V.S., D.V.H.).

## FARM AND DAIRY CATTLE INSPECTION.

During the year 219 visits were paid to farms, 380 cowsheds were inspected and the udders of 4,464 cows examined.

One cow on a farm in the Borough was found to be affected with tuberculosis of the udder. It was slaughtered, and on post mortem examination, was found to be affected with advanced tuberculosis. Seven cows showing clinical evidence of tuberculosis were slaughtered; all were found on post mortem examination to be affected with advanced tuberculosis. Eight cows were suffering from mastitis, and during the affection the milk was not used for human food.

## DAIRIES, COWSHEDS AND MILKSHOPS.

The policy of improving conditions of production and storage continues: visits were regularly paid to all producing and retailing premises in Blackburn, and many visits were made, in conjunction with the local officials, to milk producing premises outside the Borough, which supply milk for consumption in Blackburn.

A genuine desire is now obvious to meet our requirements, and persons concerned are more and more beginning to realise that it is method rather than elaborate equipment that is essential to success.

## CLEAN MILK COMPETITION.

There are three classes of Competitors for the Clean Milk Awards:—

CLASS I.—Open to all producers of Certified, Grade “A” (tuberculin-tested), and Grade “A” milk sold in Blackburn. The award in this Class is the “Redmayne” Cup, which the winner holds for one year. In addition, he receives and retains a miniature replica of the Cup, and also a Gold Medal.

This year the Cup was won by Storms Dairy Ltd., Keswick.

There were 17 entries in this Class, an increase of one over 1930.

CLASS II. is open to producers of non-designated milk whose milk is sold in Blackburn. The award in this Class is the " Porritt " Cup, which is held for one year by the winner, who receives, in addition, a miniature replica of the Cup, and also a Gold Medal, both of which he retains.

The winner in this Class was Mr. R. Townson, Magnall's Farm, Oswaldtwistle.

CLASS III is limited to farmers whose main source of livelihood is dairy farming, and in assessing the awards, not only has the quality of the milk been taken into consideration, but due attention has been paid by Mr. EDGE, of Wheelton, who has once again kindly judged, to the general farming methods employed.

So keen was competition in this class that the judge declared a tie between:—

Mr. T. Walmsley, Close Farm, Pleasington, and

Mr. W. Harrison, Home Farm, Dutton.

Each of these gentlemen will hold the " Burke " Cup for six months and will both receive a miniature replica of the Cup together with a Gold Medal.

Commencing next year, Class III will be divided into two classes: one for the best dairy farm where designated milk is produced, and two, for the best dairy farm where non-designated milk is produced. A cup, provided by an anonymous donor, will be the award for the latter section.

#### MILK (SPECIAL DESIGNATIONS) ORDER, 1923.

*Certified Milk.* The number of farms holding the certificate of the Ministry of Health and supplying Certified Milk to Blackburn is three.

Two are local, the other is some distance away, and consequently the milk from the latter is not delivered the same day as produced.

The price of the milk ranges from 7½d. to 4d. per pint.

Grade " A " (tuberculin tested) milk is being used at the Corporation Hospital.

*Grade " A " Milk.* There are 21 farms in the district where Grade " A " milk is produced ; five of these are in the Borough and 16 in the County area. In addition, there are 18 retailers of Grade " A " milk. The prices are 3d. and 3½d. per pint.

*Pasteurised Milk.* One dairy in the Borough is licensed for the pasteurisation of milk, and other dairies obtain supplies from licensed establishments outside Blackburn.

*Sterilised Milk,* which is not a designated milk, is sent into Blackburn from factories outside.

#### BACTERIOLOGICAL EXAMINATION OF MILK.

##### (a) *B. Coli.*

Two hundred and eighty-five samples were submitted to the Bacteriologist Public Health Laboratories, Liverpool. The following is a summary of his findings :—

##### *Bacillus Coli Content :—*

Not found in 1 cubic centimetre	..	..	..	..	..	..	168
Found in 1 c.c. only	..	..	..	..	..	..	40
„ 0·1 c.c.	..	..	..	..	..	..	35
„ 0·01 c.c.	..	..	..	..	..	..	10
„ 0·001 c.c.	..	..	..	..	..	..	13
„ 0·0001 c.c.	..	..	..	..	..	..	7
„ 0·00001 c.c.	..	..	..	..	..	..	12

The presence of *Bacillus Coli*, or a member of its group, is an indication of manurial contamination of the milk. The above results show 59·3% clean ; 29·8% with slight contamination, and 11·2% grossly contaminated.



The appended Table gives particulars of B. Coli counts month by month :

**TABLE 19.**

1931	Not Present in 1-C.C.	Present in 1-C.C.	Present in 1/10 C.C.	Present in 1/100 C.C.	Present in 1/1,000 C.C.	Present in 1/10,000 C.C.	Present in 1/100,000 C.C.
January ..	22	..	3	1	..	..	1
February ..	17	3	4	2	..	2	..
March ..	28	7	4	1	..	..	..
April ..	24	5	2	1	..	..	..
May ..	20	4	2	1	..	..	..
June ..	8	4	3	1	4	2	3
July ..	7	5	6	2	3	3	3
August ..	7	4	6	1	5	..	3
September ..	19	4	2	..	..	..	..
October ..	15	4	3	..	1	..	2
November ..	1	..	..	..	..	..	..
December ..	No Samples Taken.						
TOTAL ..	168	40	35	10	13	7	12

It will be seen that the heaviest contamination occurs during the months May to October (inclusive), during which period the cows are out at grass.

(b) *Tubercle Bacilli* :—

During the year 286 samples of milk were collected and examined for the presence of tubercle bacilli.

The samples were made up as follows :—285 mixed samples were taken in the course of delivery ; one special sample was taken direct from a cow showing induration of one quarter of the udder.

Of the 285 mixed samples taken, eight contained tubercle bacilli, 259 were negative, and in 18 cases the experimental animal died before a definite diagnosis could be made.

In addition to the above, I carried out microscopical examinations of abnormal milks and milks from abnormal udders, and in one case found tubercle bacilli.

All the positive mixed milks were from farms outside the Borough, so that the responsibility of investigation rested with outside Local Authorities.

Three of the positive mixed milks were from one farm, two consecutive ; one at another part of the year ; so that there were really seven tubercular infections.

At three farms three cows were found with tubercular udders.

At the other four farms special samples and controls were negative.

Mixed samples of milk supplied to the Royal Infirmary were taken periodically and examined for the presence of tubercle bacilli, and on each occasion were found to be free.

#### EXAMINATION OF MILK FOR DIRT.

During the year 584 samples of milk were taken and examined for the presence of dirt.

One hundred and eleven of these samples were taken from producer-retailers whose premises are within the Borough, and were classified as follows :

Clean	..	..	..	..	..	..	19 or 17.1%
Fairly Clean	..	..	..	..	..	..	59 or 53.1%
Contaminated	..	..	..	..	..	..	33 or 29.7%

Three hundred and ninety-five samples were taken from producer-retailers whose premises are outside the Borough :—

Clean	..	..	..	..	..	..	109 or 27.6%
Fairly Clean	..	..	..	..	..	..	221 or 55.95%
Contaminated	..	..	..	..	..	..	63 or 15.95%
Grossly Contaminated	..	..	..	..	..	..	2 or 0.5%

Fifty-six samples were taken from retailers who reside in the Borough, but who procure their supplies from producers whose premises are, for the most part, outside the Borough.

Clean	..	..	..	..	..	..	1 or 1.78%
Fairly Clean	..	..	..	..	..	..	32 or 57.1%
Contaminated	..	..	..	..	..	..	22 or 39.3%
Grossly Contaminated	..	..	..	..	..	..	1 or 1.78%

Twenty-two samples were taken from retailers who reside outside the Borough.

Clean	...	...	...	...	...	2 or 9.09%
Fairly Clean	...	...	...	...	...	13 or 59.09%
Contaminated	...	...	...	...	...	6 or 27.27%
Grossly Contaminated	...	...	...	...	...	1 or 4.54%

Samples examined for dirt are submitted to filtration through cotton-wool discs. Any departure from absolute cleanliness, as indicated by the presence of extraneous material, however slight, on the disc, places the sample in the "contaminated" class. In no case is the milk given the benefit of doubt; if there is suspicion of deposit on the disc the milk is classified as "fairly clean." "Gross contamination" and "very gross contamination" indicate the presence of manure in the milk.

#### CHEMICAL ANALYSIS OF MILK.

Four hundred and seventy-nine samples of milk, 360 of which were informal, were taken during the year and examined at the Public Health Laboratory, Liverpool. Six samples, or 1.66%, were reported not to conform with the standard prescribed by the Ministry of Agriculture. In 1931, five of the defective samples were found to be considerably below the legal standards. If an informal sample proves to be not genuine on analysis, a formal sample is purchased and submitted to the analyst.

One formal sample presented marked deficiency, and the vendor concerned was prosecuted.

TABLE 20.

AVERAGE COMPOSITION OF MILK SOLD IN BLACKBURN,  
YEAR 1931.

MONTH	No. of Samples Taken.	% of Fat	% of other Solids.
January ... ..	45	3.77	9.02
February ... ..	57	3.81	9.09
March ... ..	39	3.67	9.05
April ... ..	26	3.85	9.02
May ... ..	59	3.99	9.13
June ... ..	41	3.82	9.16
July ... ..	52	3.64	9.12
August ... ..	30	3.69	9.05
September ... ..	45	4.00	9.10
October ... ..	35	4.23	9.17
November ... ..	31	4.04	8.87
December ... ..	19	3.90	8.90
Average ... ..	479	3.86	9.05

PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS)  
REGULATIONS, 1925.

No action was necessary with regard to tuberculous employees in the Milk Trade.

THE PUBLIC HEALTH (CONDENSED MILK) REGULATIONS,  
1923 & 1927.

Twenty-eight samples were purchased under the above regulations, and all were found, on analysis, to be genuine. All were properly labelled.

These samples are included in Table 29, Food and Drugs (Adulteration) Act.

## THE ARTIFICIAL CREAM ACT, 1929.

No action has been taken under the above Act.

## THE PUBLIC HEALTH (DRIED MILK) REGULATIONS, 1923 & 1927.

No action has been taken under the above Regulations.

### SECTION 80 BLACKBURN CORPORATION ACT, 1922.

#### FOOD PREPARING PREMISES.

This Section reads as follows :—

“ Any premises ordinarily used, or proposed to be ordinarily used, for the preparation or manufacture of sausages, pressed, potted or preserved meat, fish or other food, intended for the purposes of sale, shall be registered by the owner or occupier thereof with the Corporation from time to time in such manner as they may direct, and no premises shall be used for the purposes aforesaid unless the same are so registered, and the Corporation shall have power to refuse registration of any premises where the conditions are unsuitable.”

There are 48 premises registered under the above section, and in addition there are a large number of food preparing premises which are exempt from registration.

Two hundred and thirty-six visits were made to such premises. Generally they were found to comply with requirements.

In certain cases, the necessity for repairs was pointed out, and in other cases suggestions for improvements were made and in all cases improvements were effected.

## REPORT OF WORK DONE UNDER THE DISEASES OF ANIMALS ACTS AND ORDERS.

*Foot and Mouth Disease.* Although Blackburn was included in Infected Areas on two occasions in 1931, namely, April and June, no cases of Foot and Mouth disease occurred in the Borough during the year.

There were 97 outbreaks in Great Britain, necessitating the slaughter of 10,257 animals which were diseased or had been exposed to infection.

The figures for the preceding three years were :—

1930	...	8 outbreaks, with	306 animals slaughtered.
1929	...	38 outbreaks, with	3570 animals slaughtered.
1928	...	138 outbreaks, with	11441 animals slaughtered.



*Anthrax.* One case occurred in Blackburn. A bull at a Blackburn farm, which had been ill and attended by a Veterinary Surgeon, died, and the carcass was taken to the local Knacker's yard. Suspicious signs being noticed, the case was reported to me, and, after microscopical examination of blood, I found anthrax bacilli. The carcass was transported to the Audley Destructor and cremated there.

The premises were disinfected, and all persons who had been in contact with the animal were kept under observation until danger of infection was past.

There were 466 outbreaks in Great Britain, affecting 516 animals.

Routine microscopical examination of blood smears from carcasses of animals arriving at the Abattoir and Railway Siding in a dead or dying condition, was carried on throughout the year. No cases were discovered.

*Parasitic Mange.* There were no cases in Blackburn.

One hundred and thirty-seven outbreaks were reported in Great Britain, involving 236 animals.

*Glanders.* No cases occurred in Great Britain.

*Sheep Scab.* No cases occurred in Blackburn. Three hundred and forty-seven outbreaks were reported in Great Britain.

*Swine Fever.* A farmer reported a suspected case, but on investigation, it was not confirmed. Two thousand and twenty-two outbreaks were confirmed in Great Britain.

*Tuberculosis.* The Tuberculosis (Amendment) Order of 1931 (October 15th, 1931) reduced the minimum amount of compensation payable in respect of animals slaughtered under the Order of 1925, from 45/- to 30/-.

One case of tuberculosis of the udder, and seven cases of tuberculous emaciation, were dealt with under the Tuberculosis Order of 1925. They were all classified as advanced tuberculosis.



*Cattle Market.* The approximate number of animals exposed for sale was :—

TABLE 21.

<i>Year.</i>	<i>Cattle.</i>	<i>Sheep.</i>	<i>Calves.</i>	<i>Pigs.</i>	<i>Horses</i>	<i>Asses.</i>
1931	4885	6260	2183	1244	11	...

  

<i>Year.</i>	<i>Cattle.</i>	<i>Sheep.</i>	<i>Calves.</i>	<i>Pigs.</i>	<i>Horses</i>	<i>Asses</i>
1930	6965	8869	2037	573	17	...
1929	6947	9552	2291	966	19	...
1928	6432	5655	2041	1045	19	...
1927	9960	9922	2675	1333	...	21
1926	8092	7410	2285	930	20	...
1925	7171	6962	2346	486	23	...
1924	5609	5608	3493	620	24	...
1923	7716	10026	3040	721	35	...
1922	4650	11289	2681	362	554	...
1921	4681	1913	2812	835	416	...
1920	9341	942	2258	530	365	...
1919	8345	17223	2188	163	269	...

## MEAT INSPECTION.

The number of animals slaughtered at the Public Abattoir was 74,819, this being a decrease of 9,182 compared with 1930.

Tuberculosis was, in the main, the cause of a large waste of food material, due to condemnation of diseased carcasses and parts.

The number of susceptible animals (cattle, calves, pigs) affected with Tuberculosis during 1931 was 515, or 3·43% of those slaughtered.

Corresponding percentages were in 1930, 2·38% ; 1929, 2·22 ; 1928, 2·9 ; 1927, 2·079 ; 1926, 2·15 ; 1925, 1·83 ; 1924, 1·87 ; 1923, 1·64.

Of 1,044 cows slaughtered, 176, or 16·8%, were found to be affected with tuberculosis in some degree.

Heifers show a lower percentage, as 10 out of 200, or 5% slaughtered, were affected.

Of 1,056 bulls, 59, or 5·5%, were affected.

Of 5,563 bullocks, only 37, or 0·66%, were affected.

No tuberculosis was seen in 1,037 calves slaughtered.

Of 6,114 pigs slaughtered, 233 were affected, a percentage of 3·8.

The number of carcasses in which the disease was so advanced as to necessitate total condemnation was 90, compared with 68 in 1930 ; 84 in 1929 ; 111 in 1928 ; 107 in 1927 ; 107 in 1926 ; 69 in 1925 ; 85 in 1924 ; 54 in 1923.

In 1931, 56 carcasses of cattle were totally condemned as being unfit for human food, and of these, 50 were affected with tuberculosis.

For several years I have pointed out that “ liver fluke ” in cattle and sheep has become a national scourge. The year 1931 will stand out as probably the worst year we have yet had, and if more active steps are not taken to suppress it, the results will be progressively worse in the future.

It accounted for the condemnation of 6,579 livers, compared with 5,247 in 1930 ; 6,249 in 1929 ; 6,042 in 1928 ; 3,836 in 1927 ; 2,335 in 1926.

In addition to the work at the Abattoir, visits were regularly paid to the only private slaughterhouse in the Borough, butchers' and other meat shops, food-preparing premises, wholesale and retail fish markets and meat market.

**TABLE 22.**

**NUMBER OF ANIMALS SLAUGHTERED AT THE PUBLIC ABATTOIR.**

1931.	Beasts	Sheep	Calves	Pigs	Goats	Total
January .. ..	744	4786	59	527	..	6116
February .. .	698	4273	72	546	..	5589
March .. . .	628	4014	81	479	..	5202
April .. . . .	799	5836	144	492	..	7271
May .. . . .	578	4338	24	250	..	5190
June ... . .	588	5349	51	183	..	6171
July .. . . .	555	5330	79	222	..	6186
August .. . .	576	4989	69	225	..	5859
September .. .	591	5044	83	415	..	6133
October.. . . .	676	5694	147	633	..	7150
November .. .	664	4342	118	658	..	5782
December .. .	766	5810	110	1484	..	8170
<b>TOTAL .. . .</b>	<b>7863</b>	<b>59805</b>	<b>1037</b>	<b>6114</b>	<b>..</b>	<b>74819</b>

NUMBER OF CARCASSES AND PORTIONS OF CARCASSES  
BROUGHT TO THE ABATTOIR.

TABLE 23.

1931.	CARCASSES.			BEEF		
	Beef	Mutton	Pork	Fore Qrs.	Hind Qrs.	Buttocks
January .. ..	5	24	50	1	1	...
February .. .	4	24	26	...	...	...
March .. .	5	24	22	...	...	...
April .. .	7	35	8	1	1	...
May .. .	6	38	18	...	...	...
June .. .	10	...	23	1	1	...
July .. .	10	30	19	1	1	...
August .. .	6	36	26	...	...	...
September .. .	...	...	...	10	10	...
October .. .	6	20	39	2	1	...
November .. .	2	18	24	1	1	...
December .. .	7	...	126	1	1	...
TOTALS	68	249	381	18	17	...

	CASES OF			Lengths of Pork	Legs of Pork	Tins of Meat
	Kidneys	Pork	Liver			
January .. .	9	...	...	34	11	...
February .. .	11	...	...	37	15	...
March .. .	8	...	...	40	4	...
April .. .	10	...	...	24	13	...
May .. .	19	...	...	...	...	...
June .. .	10	...	...	...	...	...
July .. .	...	...	...	...	...	...
August .. .	8	...	...	...	...	...
September .. .	11	...	...	10	...	...
October .. .	12	...	...	38	...	...
November .. .	8	...	...	56	...	...
December .. .	18	...	...	161	40	...
TOTALS ..	124	...	...	400	83	...

**TABLE 24.**  
**ORGANS AND PARTS OF CARCASES EXAMINED, REJECTED AND DESTROYED, FOR DISEASES OTHER THAN TUBERCULOSIS.**

Disease or Condition	Diaphragm	Tongues	Heads	Lungs	Hearts	Livers	Stomachs	Udders	Intestines	Kidneys	Tails	Lbs. of Meat
Fluke ..	..	..	..	..	..	6579	..	..	..	..	..	..
Cirrhosis ..	..	..	..	..	..	262	..	..	..	..	..	..
Angioma ..	..	..	..	..	..	44	..	..	..	..	..	..
Unsound ..	..	..	50	29	3	17	1	..	..	4	..	672½
Abscesses ..	..	..	2	..	..	17	12	..	..	..	..	..
Actinomycosis ..	..	..	2	..	..	..	..	..	..	..	..	..
Mammitis ..	..	..	..	..	..	..	..	84	..	..	..	..
Parasitic ..	..	..	..	35	..	39	..	..	26	5	..	..
Nephritis ..	..	..	..	..	..	..	..	..	..	37	..	..
Bruised ..	..	..	..	..	..	..	..	..	..	..	..	2457
Congested ..	..	..	..	..	..	..	..	..	..	..	..	..
Pericarditis ..	..	..	..	..	4	..	..	..	..	..	..	..
Pneumonia ..	..	..	..	15	..	..	..	..	..	..	..	..
<b>TOTAL ..</b>	<b>—</b>	<b>—</b>	<b>54</b>	<b>79</b>	<b>7</b>	<b>6958</b>	<b>13</b>	<b>84</b>	<b>26</b>	<b>46</b>	<b>—</b>	<b>3129½</b>

**TABLE 25.**  
DISEASED CARCASSES EXAMINED, REJECTED AND DESTROYED FOR DISEASES, ETC.,  
OTHER THAN TUBERCULOSIS.

CARCASSES.

BEEF.		MUTTON.		VEAL.		PORK.	
DISEASE.	No.	DISEASE.	No.	DISEASE.	No.	DISEASE.	No.
Septic Mammitis	1	Congested	51	Immature...	...	Congested...	...
Asphyxia ...	1	Edematous	43	Joint Ill ...	...	Edematous	...
Edematous	1	Asphyxia ...	6	Staggers ...	...	Jaundice ...	...
Septicæmia	1	Pneumonia	3	Congested...	...	Septicæmia	...
Congested	1	Septicæmia	1	Jaundice ...	...	Parasitic ...	...
Staggers ...	1	Parasitic ...	2	Septicæmia	...	Swine Erysipelas	...
		Emaciation	1	Edematous	...	Rachitis ...	...
				Unsound ...	...	Lymphadenoma	...
				Bruised ...	...		...
				Pneumonia	...		...
	6		107		88		21

TABLE 26.

## TUBERCULOUS CARCASSES EXAMINED AND REJECTED.

	Cows		Heifers		Bulls		Bullocks		Calves		Sheep		Pigs		Fowl	Totals	
	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected		Examined	Rejected
1931																	
January ..	10	...	...	...	4	...	...	...	...	...	...	...	14	...	6	34	6
February..	12	3	...	...	1	...	4	2	...	...	...	...	27	3	8	52	16
March ..	13	3	3	3	6	...	3	...	...	...	...	...	20	6	11	56	23
April ..	10	2	...	...	6	...	2	...	...	...	...	...	10	1	6	34	9
May ..	12	3	2	2	3	...	4	1	...	...	...	...	9	1	4	34	11
June ..	14	1	1	...	3	...	5	...	...	...	...	...	5	1	...	28	2
July ..	14	2	...	...	5	2	1	...	...	...	...	...	6	2	...	26	6
August ..	21	3	...	...	5	...	2	...	...	...	...	...	18	5	...	46	8
September	14	4	...	...	3	...	3	...	...	...	...	...	22	6	...	43	10
October ..	23	5	1	1	11	2	7	1	...	...	...	...	27	3	...	70	12
November	21	4	...	...	5	...	1	...	...	...	...	...	25	5	...	52	9
December	12	3	1	1	7	...	5	2	...	...	...	...	50	7	...	75	13
TOTALS ..	176	33	10	7	59	4	37	6	...	...	...	...	233	40	35	550	125



**TABLE 27.**  
TUBERCULOSIS IN THE ANIMALS SLAUGHTERED.

EXTENT OF THE TUBERCULAR PROCESS IN PARTIALLY REJECTED CARCASSES.																	
Kind of Animal.	Number Slaughtered.	Of which were Tuber- culous.	Totally Rejected	Heads	THORAX.			ABDOMEN.							Udders	Parts of Carcasses in lbs.	
					Lungs	Heart and Pericardium	Serous Membranes	Livers	Stomachs	Spleens	Kidneys	Intestines	Uteri	Serous Membranes			Bones
Cows	1044	176	33	90	132	—	54	3	4	—	—	—	—	—	—	1	2095
Heifers	200	10	7	1	3	—	1	1	—	—	—	—	—	—	—	—	—
Bulls	1056	59	4	43	51	—	7	2	4	—	—	—	—	—	—	—	347
Bullocks	5563	37	6	22	28	—	8	1	3	—	—	—	—	—	—	—	422
Calves	1037	...	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pigs	6114	233	40	192	193	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS	15014	515	90	348	407	—	70	7	11	—	—	—	—	—	—	1	2864

TABLE 28.

FISH, RABBITS, ETC., EXAMINED, REJECTED AND DESTROYED.

FISH												
Bags	Boxes	Lbs.	Rabbits	Tins of Meat	Turkeys	Fowl	Bags of Beans	Bags of Peas	Crates of Lettuce	Chips of Strawberries	Chips of Raspberries	Chips of Bk. Currants
3	67	318	234	5	1	32	16	64	53	36	30	19

## NUMBER OF VISITS TO INSPECT FOOD.

Fish Shops	..	..	..	..	..	..	..	..	..	857
Provision Shops	..	..	..	..	..	..	..	..	..	1074
Butchers' Shops	..	..	..	..	..	..	..	..	..	1997
Private Slaughterhouses	..	..	..	..	..	..	..	..	..	41
Meat Market	..	..	..	..	..	..	..	..	..	172
Fish Market	..	..	..	..	..	..	..	..	..	248
Railway Station	..	..	..	..	..	..	..	..	..	268
										4657

## CARCASSES, ETC., SENT FOR UTILIZATION.

					Tons.	Cwis.	Qrs.
January	..	..	..	..	2	18	3
February	..	..	..	..	4	15	2
March	..	..	..	..	4	13	1
April	..	..	..	..	5	0	0
May	..	..	..	..	3	12	0
June	..	..	..	..	2	5	2
July	..	..	..	..	4	6	2
August	..	..	..	..	3	12	1
September	..	..	..	..	4	0	2
October	..	..	..	..	8	4	1
November	..	..	..	..	6	5	2
December	..	..	..	..	8	5	2
TOTAL	..	..	..	..	57	19	2

E. J. BURNDRED,  
*Veterinary and Chief Meat Inspector.*

## ICE CREAM.

There are 129 ice-cream preparing premises in Blackburn, to which 430 visits were paid during the year. Cleansing and whitewashing has been carried out at 104 of the premises, and in 28 instances the existing sanitary conditions were otherwise improved upon.

As far as the limited powers of control have permitted, efforts have been made to improve the standard of ice-cream purveyed in the town. In this connection it is pleasing to record that samples of ice-cream examined during the year have yielded better bacteriological results than during 1929 and 1930. In fact, with one exception, all were satisfactory.

## THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

The Public Analyst is Professor W. H. Roberts, M.Sc., F.I.C. Samples taken under the above Acts are submitted to him for examination at the Public Health Laboratory, Liverpool.

The number of samples examined during 1931 was 729, compared with 868 in 1930. Fifteen, or 2·05%, of the total proved on examination to be adulterated, or not up to standard.

TABLE 29.

## THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

	Samples Taken.		Samples Genuine.		Samples Adulterated.	
	Formal.	Inform'l	Formal.	Inform'l	Formal.	Inform'l
Milk .....	106	180	104	178	2	2
Graded Milk .....	11	180	11	178	-	2
Bisto .....	-	1	-	1	-	-
Butter .....	-	23	-	23	-	-
Margarine .....	-	15	-	15	-	-
Tea .....	-	21	-	21	-	-
Coffee .....	-	8	-	8	-	-
Cocoa .....	-	18	-	18	-	-
Jam .....	-	18	-	17	-	1
Lard .....	-	3	-	3	-	-
Sausage .....	-	1	-	1	-	-
Cheese .....	-	6	-	6	-	-
Sugar .....	-	3	-	3	-	-
Cream .....	-	8	-	8	-	-
Condensed Full Cream Milk (Sweetened) .....	-	12	-	12	-	-
Condensed Full Cream Milk (Unsweetened) .....	-	8	-	8	-	-
Condensed Machine Skimmed Milk (Sweetened) .....	-	8	-	8	-	-
Custard Powder .....	-	10	-	10	-	-
Egg Powder .....	-	8	-	8	-	-
Baking Powder .....	-	9	-	8	-	1
Rice .....	-	4	-	2	-	2
Lemon Curd .....	-	5	-	5	-	-
Self-Raising Flour .....	-	3	-	3	-	-
Tinned Pears .....	-	3	-	2	-	1
„ Peaches .....	-	5	-	4	-	1
„ Pineapple .....	-	3	-	3	-	-
„ Fruit Salad .....	-	5	-	3	-	2
„ Cherries .....	-	2	-	1	-	1
„ Plums .....	-	-	-	-	-	-
„ Strawberries .....	-	-	-	-	-	-
„ Crab .....	-	3	-	3	-	-
„ Lobster .....	-	2	-	2	-	-
Mince Meat .....	-	1	-	1	-	-
Bloater Paste .....	-	2	-	2	-	-
Honey .....	-	3	-	3	-	-
Raspberry Vinegar .....	-	1	-	1	-	-
Pickles .....	-	1	-	1	-	-
Soothing Syrup .....	-	1	-	1	-	-
Jelly .....	-	4	-	4	-	-
Glycerine and Lemon Juice .....	-	1	-	1	-	-
Olive Oil .....	-	2	-	2	-	-
Camphorated Oil .....	-	2	-	2	-	-
Ginger Wine .....	-	1	-	1	-	-
Ice Cream .....	-	10	-	10	-	-
Castor Oil .....	-	2	-	2	-	-
Tizer, Lemonado .....	-	1	-	1	-	-
Barloy .....	-	1	-	1	-	-
Oatmeal .....	-	1	-	1	-	-
Ovaltine .....	-	2	-	2	-	-
Sweets Dusting Powder .....	-	-	-	-	-	-
Confectionery .....	-	-	-	-	-	-
Curing Material .....	-	-	-	-	-	-
Corned Beef .....	-	1	-	1	-	-
TOTALS .....	117	612	115	599	2	13

TABLE 30.

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.—ACTION TAKEN IN REGARD TO ADULTERATED SAMPLES.

Articles Purchased.	Number Analysed	Number Genuine	Number Adulterated	Number of Sample	Amount of Adulteration.		Action Taken.
					Formal	Informal	
Milk ...	479	473	6	837		Yes	10% deficient in Milk Fat ...
				847		Yes	6% " " " "
				924		Yes	10% " " " "
				36		Yes	13% " " " "
				211	Yes		13% " " " "
				57	Yes		8% " " " "
Baking Pdr...	9	8	1	50		Yes	20% deficient in Carbon Dioxide
Tinned Pears	3	2	1	61		Yes	160 parts of tin per million
" Peaches.	5	4	1	62		Yes	190 " " " "
" Fruit Sal.	5	3	2	63		Yes	285 " " " "
" "				142		Yes	150 " " " "
" Cherries...	2	1	1	226		Yes	285 " " " "
Jam ...	18	17	1	346		Yes	80 parts of Sulphur Dioxide per million
Rice ...	4	2	2	262		Yes	0.4% of Tale ...
" ...				468		Yes	0.2% of Tale ...
							Other samples taken and found genuine ; Warning Letter M.O.H. Do. Do. Do. Summoned. Case dismissed. Summoned and fined 20/- and 8/- Analyst Fee. Sold under a warranty. Warning Letter M.O.H. Do. Do. Do. Do. Do. Do. Do. Do.

TABLE 31.

## THE PUBLIC HEALTH (PRESERVATIVE, &amp;C. IN FOOD) REGULATIONS, 1925 &amp; 1927.

DESCRIPTION OF SAMPLE.	No. of Samples Examined	No. of Samples Free	No. Containing Preservative	Where examination of preservative has been made and none found the fact is indicated by a x. All results are expressed in parts per million.							
				Sulphur Dioxide	Benzoic Acid	Borates	Salicylic Acid	H'drogen Peroxide	Formalde- hyde	Fluorides	Sodium Nitrite
Milk .. .. .	479	—	—			x			x		
Cream and Tinned Cream ..	9	—	—			x			x		
Butter .. .. .	22	—	—			x				x	
Margarine.. .. .	15	—	—			x				x	
Jelly .. .. .	4	1	1	80	x		x				
" .. .. .	—	—	1	20	x		x				
" .. .. .	—	—	1	30	x		x				
Honey .. .. .	3	3	—	x							
Lemon Cheese and Curd ..	4	3	1	60	x						
Custard Powder .. .. .	8	8	—	x							
Tongue Paste ... .. .	1	1	—	x							
Sugar .. .. .	3	3	—	x							
Barley .. .. .	1	1	—	x							
Mince Meat .. .. .	1	1	—	x							
Condensed Milk .. .. .	28	28	—		x				x		
Ice Cream .. .. .	10	10	—	x							
Bloater Paste .. .. .	1	1	—	x							
Sausage ... .. .	1	1	—	x							
Lemonade .. .. .	1	1	—	x							
Temperance Beverage ..	1	—	1	x	160				x		
Jam ... .. .	18	—	1	30	x				x		
" .. .. .	—	—	1	40	x				x		
" .. .. .	—	—	1	30	x				x		
" .. .. .	—	—	1	15	x				x		
" .. .. .	—	—	1	80	x				x		
" .. .. .	—	—	1	40	x				x		



## FERTILISERS AND FEEDING STUFFS ACT, 1926.

Twenty samples of feeding stuffs and fertilisers were examined by the Analyst during the year. Of these, 10 conformed with the statutory statement, and 10 failed to do so. The vendors of the latter samples were informed of the difference between the actual composition and the composition as defined in the statutory statement, and the deficiency or excess was pointed out.

The appended Table gives particulars of work done under the Act :—

TABLE 32.

ARTICLE.	Formal	Informal	According to Statutory Statement	Not According to Statutory Statement	ACTION TAKEN.
Lawn Manure ... ..		1	1		The Vendors informed of the divergences between the analysis and Statutory Statement.
Meat and Bone Meal .	1	3	2	2	
Uveco ... ..		1	1		
Linseed Cake ... ..		1	1		
Palm Kernel Meal ...		2	2		
N. African Phosphate		1		1	
Sulphate of Ammonia		1		1	
Meat Meal... ..		1	1		
Bone Meal... ..		1		1	
Sulphate of Potash ...		1		1	
Super Phosphate ...		1		1	Do.
Maize Germ Meal ...		1		1	Do.
Soya Bean Meal ...		1	1		Do.
Linseed Meal ... ..		1	1		Do.
Balanced Rations ...	1			1	Do.
Biscuit, Meat and Meat Meal... ..	1			1	Do.

## SUCCESSFUL PROSECUTIONS OTHER THAN UNDER THE FOOD AND DRUGS (ADULTERATION) ACT.

One milk vendor fined 20/- for selling milk out of an unlabelled can.

One milk vendor fined 4/- for not having his name and address on the milk float.

One milk vendor fined 20/- for not having his name and address on the milk float.

One milk vendor fined 10/- for selling milk out of an unlabelled can.

## MERCHANDISE MARKS ACT, 1926.

Every endeavour has been made to give publicity to the provisions of the above Act.

Notices, setting out shortly and concisely the provisions of the Act, have been distributed to all traders concerned. Five hundred and ninety-nine visits were made to premises following the distribution of these notices, and personal warnings given by the Inspector in many instances. Prosecutions were instituted in 17 cases, and fines were inflicted varying from four shillings to twenty shillings.

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*PART IV.*

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Prevalence of,  
*and*  
Control over,  
Infectious Disease.

TABLE 33.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1931.

NOTIFIABLE DISEASE.	Cases notified in whole District.													Total cases notified in each Locality.												Total cases removed to Corporation Hospital	Total Deaths in the Borough																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	At all Ages	At Ages—Years.												St. Stephen's	Trinity	St. Michael's	St. John's	St. Silas'	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas'	Park	St. Luke's			St. Mark's	St. Andrew's																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 55	55 to 65																	65 and upwards																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Small-pox...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

\* Notifiable from July 1st to October 31st only.

## INFECTIOUS DISEASES

## AGE INCIDENCE OF CASES NOTIFIED.

	Under One Year		1--2 Years		2--3 Years		3--4 Years		4--5 Years		5--10 Years		10--15 Years		15--20 Years		20--35 Years		35--45 Years		45--65 Years		Over 65 Years	Total		Totals 1928	Totals 1929	Totals 1930				
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F				M	F	M	F
Scarlet Fever .....	..	..	2	2	3	6	5	3	4	14	12	4	10	3	4	4	4	1	..	..	..	..	..	..	37	44	37	33	374	387	139	203
Diphtheria .....	1	..	1	1	1	2	1	2	2	8	5	3	1	5	9	4	5	1	3	..	2	..	..	..	27	30	21	41	82	115	58	75
Erysipelas.....	..	..	..	..	..	..	..	..	..	1	..	2	..	1	..	1	2	4	5	4	5	5	6	18	18	19	26	25	32	24	32	
Enteric Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	2	1	3	3	4	3	
Puerperal Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	7	10	..	..	9	..	7	
Puerperal Pyrexia .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	17	..	2	..	..	..	..	21	..	..	..	16	..	16	
Ophthalmia Neonatorum	6	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	9	8	5	8	10	11
Pneumonia Ac. Primary..	8	4	9	11	11	5	7	4	5	5	23	15	7	6	11	3	29	20	19	15	24	22	13	14	166	124	205	153	165	140	95	63
Tuberculosis—Lungs .....	..	..	2	..	..	..	..	1	..	4	2	2	2	9	11	22	37	17	7	29	11	4	..	88	72	77	73	64	61	83	70	
do. Other Forms.	2	1	1	1	..	1	..	1	1	..	9	6	4	1	7	3	4	..	3	..	1	..	1	27	23	31	32	16	14	21	17	
Encephalitis Lethargica..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	2	..	..	1	3	3	16	16	1	4	..	2
Diarrhoea .....	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	2	2	2	4	3	2
TOTALS .....	17	7	10	19	14	10	15	11	12	11	59	40	22	20	36	33	63	97	44	35	60	41	22	22	374	346	419	395	737	793	437	504

TABLE 35.

## Infectious Diseases.

CASE INCIDENCE PER 1000 OF THE POPULATION.

	St. Stephen's	Trinity	St. Michael's	St. John's	St. Silas	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas	Park	St. Luke's	St. Mark's	St. Andrew's
Scarlet Fever .....	0.74	0.46	0.58	1.13	1.47	1.25	0.30	0.37	0.43	0.42	0.21	0.13	1.07	0.28
Diphtheria .....	0.46	0.34	0.68	0.28	0.45	0.52	0.15	0.92	0.43	0.59	0.64	0.00	0.39	0.47
Erysipelas.....	0.18	0.57	0.34	0.28	0.22	0.20	0.30	0.37	0.32	0.33	0.32	0.40	0.19	0.09
Enteric Fever .....	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Puerperal Fever .....	0.00	0.11	0.00	0.00	0.11	0.10	0.00	0.00	0.00	0.16	0.00	0.13	0.00	0.09
Puerperal Pyrexia .....	0.00	0.46	0.11	0.00	0.34	0.00	0.15	0.00	0.10	0.42	0.00	0.27	0.00	0.38
Ophthalmia Neonatorum ....	0.09	0.00	0.00	0.14	0.11	0.10	0.30	0.00	0.00	0.08	0.00	0.00	0.00	0.00
Acute Primary Pneumonia ..	3.08	1.84	1.59	2.13	1.24	1.87	1.67	2.40	2.51	2.96	2.37	2.83	2.53	3.05
Tuberculosis—Lungs .....	1.87	1.15	1.02	0.71	0.22	1.56	1.37	2.40	1.42	1.52	0.53	1.62	1.26	1.52
do.      Other Forms ..	0.74	0.23	0.56	0.42	0.22	0.31	0.00	0.18	0.65	0.59	0.21	0.54	0.48	0.19
Encephalitis Lethargica.....	0.18	0.00	0.00	0.00	0.11	0.00	0.30	0.00	0.00	0.08	0.00	0.00	0.00	0.00
Diarrhœa .....	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.10	0.00	0.00	0.00	0.00	0.00



TABLE 36.

SHEWING NUMBER OF CASES OF INFECTIOUS DISEASES NOTIFIED FROM 1912 TO 1931.

Disease.	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	5	10	34	...	...
Diphtheria (including Mem- branous Group)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	124	197	133	57
Erysipelas	55	76	62	39	52	50	57	30	69	45	52	35	62	67	81	99	42	57	56	36
Scarlet Fever	87	90	97	69	66	40	52	38	59	47	54	52	45	39	44	66	121	761	342	81
Enteric Fever	116	268	704	460	153	96	150	136	181	211	231	216	70	304	218	125	121	761	342	81
Puerperal Fever	26	31	31	44	14	13	13	3	5	2	5	3	3	2	9	2	1	6	7	2
Puerperal Pyrexia	9	8	10	f	5	3	5	5	12	15	7	12	10	13	11	7	10	9	7	7
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	19	9	16	16	21
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	1	...	...	...	2	...	1	2	...	...	...	...	...	...	...	...	...	...	4	...
Pulmonary Tuberculosis	4	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other forms of Tuberculosis	217	230	212	213	154	131	176	124	88	150	145	176	150	169	132	111	106	125	153	160
Ophthalmia Neonatorum	...	104	60	88	49	47	54	47	38	71	70	102	63	71	44	40	36	30	38	50
*Measles	...	...	15	19	15	7	15	18	22	24	22	15	17	25	19	19	17	13	21	7
Encephalitis Lethargica	...	...	...	...	1081	1938	1560	103	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	5	2	2	1	10	32	5	9	8	7	5	2	6
Malaria	...	...	...	...	...	...	...	3	1	1	...	...	...	...	1	1	1	...	5	1
Pneumonia	...	...	...	...	...	...	...	61	18	4	2	1	1	1	1	...	...	...	...	...
†Diarrhoea...	...	...	...	...	...	...	...	114	158	176	275	349	358	242	149	256	222	305	161	290
*Chicken-Pox	...	...	...	...	...	...	...	...	...	31	1	2	4	21	12	1	1	6	5	3
TOTALS	515	808	1191	937	1592	2325	2083	689	654	782	865	974	816	959	750	759	751	1823	950	721

\* No longer notifiable.

† Notifiable from July 1st to October 31st.

TABLE 37.

## NOTIFICATION OF INFECTIOUS DISEASES.

Disease	Incidence Rate per 1000 of Population										Death Rate per 1000 of Population					Housing Conditions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	Total Deaths					1000 of Population										1931			1930			1929			1928			1927																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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\* 4 Cases of Pneumonia from outside the Borough.

5 Cases of Puerperal Pyrexia from outside the Borough.

1 Case of Encephalitis Lethargica from outside the Borough.



## SCARLET FEVER.

During 1931, 81 cases of scarlet fever were notified, an incidence of 0·65 cases per 1,000 living. The majority of the cases were of a mild type, and although one case terminated fatally, death, which took place during convalescence, was due, not to scarlet fever, but to spontaneous pneumo-thorax. Sixty-six cases, or 81·4% of those notified, were removed to the Hospital.

As in 1930 the heaviest incidence was noted amongst the 5-15 group, where 40 cases, or 49·9% of the total notified, occurred.

The Dick Test and active immunisation have not been employed by the Health Department.

Scarlet fever anti-toxin is supplied free of charge to practitioners desirous of passively immunising immediate contacts of the disease.

Two " return " cases were brought to the notice of the Health Department during the year.

Two cases developed a secondary attack during their stay in Hospital.

TABLE 39.

## SCARLET FEVER.

Year.	Cases Notified in Black- burn.	Attack Rate per 100,000 of popu- lation.	No. of Deaths.	Per- centage of Deaths to cases notified.	All Cases Admitted to Hospital.		
					No. Admitted	No. of Deaths.	Per- centage of Deaths to cases treated.
1904 . . . . .	458	347.8	13	2.84	336	12	3.57
1905 . . . . .	1578	1188.7	76	4.81	1107	52	4.60
1906 . . . . .	849	635.5	33	3.88	625	27	4.30
1907 . . . . .	544	479.0	21	3.86	381	12	3.10
1908 . . . . .	595	439.8	20	3.36	434	18	4.10
1909 . . . . .	1013	744.1	53	5.23	760	39	5.10
1910 . . . . .	795	580.3	27	3.39	538	17	3.10
1911 . . . . .	343	248.9	10	2.91	241	5	2.00
1912 . . . . .	116	87.1	3	2.59	78	2	2.50
1913 . . . . .	268	200.8	1	0.37	199	2	1.01
1914 . . . . .	704	524.1	10	1.40	560	6	1.07
1915 . . . . .	460	341.5	6	1.30	360	5	1.40
1916 . . . . .	153	116.1	4	2.60	101	2	1.90
1917 . . . . .	96	76.0	2	2.08	68	1	1.50
1918 . . . . .	150	120.1	2	1.39	122	2	1.60
1919 . . . . .	136	103.6	2	1.47	105	2	1.90
1920 . . . . .	181	120.9	3	1.60	164	3	2.40
1921 . . . . .	211	163.0	1	0.40	162	1	0.60
1922 . . . . .	231	178.5	2	0.80	186	2	0.80
1923 . . . . .	216	167.4	0	0.00	181	0	0.00
1924 . . . . .	70	54.2	1	1.43	62	1	1.60
1925 . . . . .	304	239.5	3	0.98	274	3	1.10
1926 . . . . .	218	175.2	1	0.46	192	1	0.53
1927 . . . . .	125	100.4	1	0.80	116	1	0.86
1928 . . . . .	121	96.7	0	0.00	104	0	0.00
1929 . . . . .	761	607.3	2	0.26	634	1	0.15
1930 . . . . .	342	272.1	0	0.00	285	0	0.00
1931 . . . . .	81	65.3	0	0.00	64	1	1.56



## DIPHTHERIA.

During the year 57 cases of diphtheria were notified, a figure equivalent to an attack rate of 0·46 per 1,000 of population. There were two deaths, giving a mortality rate of 3·51 per 100 cases notified.

Seventeen, or 29·8%, of the cases occurred in the 5—15 age group.

Fifty cases, or 87·7% of the total notified, were removed to Hospital.

The low mortality from diphtheria in the year under review is attributable to the following facts :—

- (1) The disease was of comparatively mild type ;
- (2) Thirty-nine of the cases notified were either admitted to hospital or received anti-toxin on the first day of disease ;
- (3) In only five cases was anti-toxin delayed beyond the second day. The fatal cases came within this group and did not receive anti-toxin until admission to hospital on the fourth day of disease.



**TABLE 40.**  
**DIPHTHERIA.**

Year.	Cases Notified in Black- burn.	Attack Rate per 100,000 of popu- lation.	No. of Deaths.	Per- centage of Deaths to cases notified.	All Cases Admitted to Hospital.		
					No. Admitted	No. of Deaths.	Per- centage of Deaths to cases treated.
1904 .....	60	45.5	11	18.3	11	2	41.1
1905 .....	157	118.2	33	21.0	4	0	<i>Nil.</i>
1906 .....	166	124.2	26	15.7	56	5	8.9
1907 .....	150	111.5	17	11.3	63	5	7.9
1908 .....	100	73.9	12	12.0	39	0	<i>Nil.</i>
1909 .....	102	74.9	18	17.6	29	5	17.2
1910 .....	96	70.0	22	22.9	42	9	21.4
1911 .....	107	77.6	28	26.1	54	9	16.6
1912 .....	55	41.3	9	16.4	36	5	13.9
1913 .....	76	56.7	7	9.2	55	7	12.7
1914 .....	62	46.1	7	11.3	37	2	5.4
1915 .....	39	28.9	8	20.6	24	3	12.5
1916 .....	52	39.5	9	17.3	32	3	9.3
1917 .....	50	39.5	8	16.0	41	4	9.9
1918 .....	57	45.6	11	19.3	56	4	7.1
1919 .....	30	22.8	3	10.0	24	1	4.1
1920 .....	69	49.3	10	14.5	59	7	13.2
1921 .....	45	34.8	6	13.4	27	3	11.0
1922 .....	52	40.1	7	13.4	38	6	13.0
1923 .....	35	27.1	1	2.8	32	1	3.1
1924 .....	62	48.0	3	4.8	48	2	4.1
1925 .....	67	52.8	8	11.9	58	6	7.7
1926 .....	81	65.0	8	9.9	73	8	9.3
1927 .....	99	79.5	11	11.1	106	12	11.3
1928 .....	124	99.1	14	11.2	111	7	6.3
1929 .....	197	157.2	18	9.1	175	16	9.2
1930 .....	133	106.0	9	6.7	125	12	9.6
1931 .....	57	46.0	2	3.5	50	3*	6.00

The above Table shows (a) That the disease is less fatal than 20 years ago. (b) That a much larger number of cases seek hospital treatment.

\* Two of these deaths were in respect of persons admitted as diphtheria, but who were actually suffering from streptococcal septicaemia and broncho-pneumonia respectively.

## SUPPLY OF ANTITOXIN TO PRACTITIONERS.

A supply of antitoxin for the use of practitioners is kept at the Health Office. A further quantity is kept at the Police Office, to which practitioners apply when the Health Office is closed.

During the year 342,000 units of anti-toxin have been issued to practitioners in the area.

Practitioners are advised to administer prophylactic doses of anti-toxin to immediate contacts of cases of diphtheria. On request anti-toxin is supplied free for this purpose.

## DIPHTHERIA PREVENTION.

The work of diphtheria prophylaxis, inaugurated in 1929, has continued throughout the year. Three sessions have been held each week at Victoria Street, 336 cases have attended, and 93 persons were in attendance at the end of the year. Of 191 persons who completed the full course of treatment during the year and reattended for final test and reading, 173, or 90·5%, gave a negative reaction.

Attendances at the Clinic during the year have been disappointing, and notwithstanding energetic propaganda, the majority of parents remain apathetic to the dangers of diphtheria and to the benefits of active immunisation. The majority of mothers approached are in sympathy with the scheme, such opposition as is met with coming from the fathers, who veto treatment on the grounds of discomfort experienced by themselves following anti-typhoid or other inoculations during war service.

At the time of writing this Report a fresh form of propaganda has been adopted and, although too short a time has elapsed since its inception for an accurate forecast of results to be given, the response has been encouraging so far.

The method adopted is to circularise the parents of all children notified as diphtheria within the preceeding five years. A leaflet, describing the advantages of immunisation, together with an attached consent form, is left at the house by the Sanitary Inspector in whose district the case resides. The Inspector explains the treatment, deals with any possible objections, and calls at a later date to ascertain the parent's decision.

Owing to certain isolated cases of diphtheria occurring amongst those who have either discontinued treatment prior to completion of the full course, or who, following the full course of injections, have failed to attend for confirmatory test of immunity, the immunisation scheme has met with covert opposition in certain quarters of the town. Not only has the efficacy of the treatment been questioned, but infection, in one instance, was attributed by relatives and neighbours of the patient to the administration of prophylactic.

**TABLE 41.**  
**CASES ATTENDING DIPHTHERIA PREVENTION CLINIC 1931.**

AGE GROUP	No. submitted to Primary Schick Test.		No. injected with T.A.F.* and completed full course of Treatment.		No. who failed to avail themselves of Treatment. After:—			TESTED AFTER FULL COURSE OF TREATMENT.				Failed to Attend Test.		Re-Tested but failed to attend for Final Exam.	Schick Tested after 2nd course of injection and found—		Primary Schick Test failed to attend for reading.	Under Treat- ment Dec. 1931.
	Positive	Nega- tive	After Test which proved Positive	With- out Test	1 In- ject'n	2 In- ject'n	3 In- ject'n	No. Tested	Found Negative and given Certificate of Immunity	Further course of Treatment	Refused further course of Treatment	1st.	2nd		+	—		
Under 5 Years	M. ..	..	..	19	..	..	..	18	17	..	..	1	..	1	..	..	..	20
	F. ..	..	..	28	1	1	..	27	27	..	..	1	..	..	..	..	..	20
5 Years to 10 Years	M. 2	..	2	11	..	..	..	13	11	..	..	..	..	2	..	..	..	17
	F. 2	..	2	20	2	..	..	21	19	..	..	1	..	2	..	..	..	14
10 Years to 15 Years	M. 2	..	2	2	1	1	..	4	3	..	..	..	..	1	..	..	1	10
	F. 3	1	3	11	1	..	..	13	12	..	..	1	..	1	..	..	..	9
15 Years and Over	M. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	F. ..	..	..	2	..	..	..	2	2	..	..	..	..	..	..	..	1	2
TOTALS ..	9	1	9	93	5	2	..	98	91	..	..	4	..	7	..	..	2	93

\* T.A.F.—Toxoid-antitoxin Floccules.

TABLE 42.

CASES ATTENDING DIPHTHERIA PREVENTION CLINIC FOR COMPLETION OF COURSE COMMENCED 1930.

AGE GROUP		No. cases completing course of injections but not tested at end of 1930.	TESTED AFTER FULL COURSE OF TREATMENT.					Failed to attend for Test.	Re-tested but failed to attend for Final Exam	Schick Tested after 2nd course of injection and found :—		Under Treatment Dec. 1931.
			No. Tested	Found Negative and given Certificate of Immunity	FOUND POSITIVE		1st.			+	—	
					Further course of Treatment	Refused further course of Treatment						
Under	M.	18	16	14	2	—	2	—	—	—	—	—
5 Years	F.	29	20	14	2	1	9	3	1	—	—	1
5 Years to 10 Years	M.	22	19	15	3	—	3	1	—	3	—	—
10 Years	F.	29	25	20	3	—	4	2	1	2	—	1
10 Years to 15 Years	M.	12	11	7	3	—	1	1	—	3	—	—
15 Years	F.	14	13	10	2	—	1	1	—	2	—	—
15 Years and Over	M.	4	3	2	—	1	1	—	—	—	—	—
	F.	3	1	—	1	—	2	—	1	—	—	1
TOTALS ... ..		131	108	82	16	2	23	8	3	12	3	3

**TABLE 43.****SUMMARY OF CASES ATTENDING DIPHTHERIA PREVENTION CLINIC, 1931.**

Total Cases Attending Diphtheria Prevention Clinic.	No. of Cases Completing Course and given Certificate of Immunity.	No. of Cases Failing to Complete Full Course.	No. of Cases still under Treatment on Dec. 31st, 1931.
336	185	55	96

**ENTERIC FEVER.**

Of two cases of enteric fever notified in the Borough one terminated fatally.

**PUBLIC HEALTH (INFECTIOUS DISEASES) REGULATIONS, 1927.**

Two hundred and ninety cases of acute primary and acute influenzal pneumonia were notified in 1931, compared with 161 in 1930. Forty-one of these cases terminated fatally, which represents a case mortality of 14.1%, compared with 8.7% in 1930.

No notifications were received in respect of Malaria.

**MEASLES.**

This disease is not notifiable under the Infectious Diseases (Notification) Act.

Four hundred and forty-seven cases were brought to the notice of the Public Health Department by parents and teachers. The cases notified in previous years were : 1,976 in 1930 ; 242 in 1929 ; 67 in 1928 ; 1,272 in 1927 ; and 619 in 1926.

One death from measles occurred during the year, equivalent to a death-rate of 0.008 per 1,000 living.

**WHOOPING COUGH.**

This disease is not notifiable. Such cases as were brought to the notice of the Health Department have been ascertained through the agency of teachers, school attendance officers, and the Maternity and Child Welfare Centres. The number of cases (178) was lower than in 1930, when 221 cases were notified ; 15 deaths occurred from this cause, a case mortality rate of 8.42%, compared with 2.26% in 1930.



## DIARRHŒA.

This disease is voluntarily notifiable in Blackburn between July 1st and October 31st of each year, notification being required in respect of children under two years of age. Only three cases were notified during the year.

Diarrhœa was certified as the cause of 13 deaths.

Eight of the deaths were in respect of infants under one year of age ; two were in the 1—2 age group.

The death rate per 1,000 births for the age group under two years was 6·4 ; the corresponding figure in 1930 was 5·6, and in 1929 3·21.

## DYSENTERY.

During the year one case of Sonne dysentery occurred, the case being a casual at Queen's Park Hospital.

## CHICKEN-POX.

During 1931 271 cases were notified by parents, school teachers, etc., compared with 564 cases notified in 1930, and 706 cases in 1929.

## ANTHRAX.

No cases of human anthrax occurred in Blackburn during the year.

## ENCEPHALITIS LETHARGICA.

During 1931 six cases were notified as encephalitis lethargica. Thirteen cases were certified as having died from encephalitis lethargica during the year.

Two out-of-the Borough cases died of encephalitis lethargica in local Hospitals.

No special arrangements exist for the after-care of cases of encephalitis lethargica, although accommodation is available at Queen's Park Hospital for this class of case.

## OTHER NON-NOTIFIABLE DISEASES.

Full use is made of information received from teachers and school attendance officers respecting the occurrence of cases of measles and whooping-cough, etc. These cases are followed up and investigated by the District Sanitary Inspectors, who submit investigation reports to the Medical Officer of Health.

## INFLUENZA.

Influenza was fairly prevalent during the first and last quarters of the year and accounted for 52 deaths, a figure equivalent to 0.42 deaths per 1,000 population.

TABLE 44.

VACCINATION RETURNS, 1931.

Month	Births	Successfully Vaccinated	Exempted	Died Unvaccin- ated	Vaccination Postponed	Removed not traced	Removed traced	Unaccount- ed for	Insuscept- able
January ..	121	41	71	5	—	—	3	1	—
February .	105	39	60	4	—	1	—	1	—
March ..	156	58	86	5	1	—	2	4	—
April ..	168	59	83	9	4	4	—	9	—
May ..	132	41	77	5	4	—	—	5	—
June ..	167	68	85	1	1	1	—	10	1
July ..	156	44	96	7	—	—	1	8	—
August ..	122	29	77	5	—	—	—	11	—
September ..	148	42	75	5	2	—	—	23	1
October..	146	28	70	2	—	1	—	44	1
November ..	129	8	52	5	—	—	—	64	—
December ..	119	3	32	3	—	—	—	81	—
TOTALS ..	1669	460	864	56	12	7	6	261	3

From the above Table it will be noted that of 1,669 children born during the year only 460, or 27.5%, were successfully vaccinated, and exemptions were successfully claimed in respect of 864 children, or 51.7% of those born.

## SMALL-POX.

No cases of Small-Pox were notified during the year and, in consequence, no action was necessary under the Public Health (Small-Pox Prevention) Regulations.

## CORPORATION HOSPITAL.

There are 124 beds at the Corporation Hospital, allotted as follows :—

Searlet Fever	...	...	...	...	...	30 beds
Diphtheria	...	...	..	...	...	16 beds
Tuberculosis	...	...	...	...	...	64 beds
Other Infectious Diseases		...	...	..		14 beds

The extension to Ward III, completed in March, has increased the number of infectious disease beds by four. Good use has been made of the extension during the year, and the extra isolation cubicles have made possible the admission of a wider variety of infections than has previously been possible.

TABLE 45.

## Corporation Hospital.

	Patients remaining in Hospital on January 1st, 1931.			Patients admitted and Discharged in 1931.			Patients remaining in Hospital on December 31st, 1931			Analysis of all cases admitted in 1931 whether discharged or not during the year.				Average number of beds occupied during 1931	Cases removed expressed as a percentage of total notified
	Total	Re- cover'd	Died	Total	Re- covered	Died	Total	Re- covered	Died	Total	Re- covered	Died	Case Mor- tality %	Av. No of days in Hosp'l	
Tuberculosis .. ..	47	41	5	95	74	21	53	24	7	148	98	28	19.04	139.32	0.0
INFECTIOUS DISEASES															
Scarlet Fever ..	5	5	—	68	67	1	14	14	—	82	81	1	1.22	34.36	79.0
Diphtheria ..	8	8	—	49	46	3	7	7	—	56	53	3	5.35	36.58	87.7
Enteric Fever ..	—	—	—	2	1	1	—	—	—	2	1	1	50.00	21.00	50.0
Measles ..	1	1	—	—	—	—	—	—	—	—	—	—	0.00	0.00	—
Erysipelas ..	2	1	1	9	7	2	1	1	—	10	8	2	20.00	21.10	22.2
Chicken Pox ..	—	—	—	1	1	—	—	—	—	1	1	—	0.00	20.50	—
Other Diseases ..	—	—	—	14	9	5	1	1	—	15	10	5	33.33	16.92	—
Puerperal Fever ..	—	—	—	2	2	—	—	—	—	2	2	—	0.00	28.00	28.6
Puerperal Pyrexia ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS .. ..	63	56	6	240	207	33	76	47	7	316	254	40	12.6	35.03	16.1

## SCARLET FEVER.

Eighty-two cases of scarlet fever were admitted to the Hospital during the year, of which one terminated fatally. This is equivalent to a case mortality of 1.22%. The death was in respect of a convalescent male adult, who succumbed to a spontaneous pneumo-thorax.

Anti-toxin is administered to all cases of scarlet fever admitted, and patients are no longer detained in hospital until desquamation ceases, provided always that no discharges or septic sores are present.

The following Table gives the ages and sexes of the patients admitted :—

TABLE 46.

<i>Ages.</i>	<i>Males.</i>	<i>Females.</i>	<i>Totals.</i>	<i>Deaths.</i>
0—1 years ..	—	—	—	—
1—2 „ ..	—	2	2	—
2—3 „ ..	2	4	6	—
3—4 „ ..	4	5	9	—
4—5 „ ..	2	1	3	—
5—10 „ ..	9	15	24	—
10—15 „ ..	7	13	20	—
15—25 „ ..	4	9	13	—
25—35 „ ..	2	2	4	1
35—45 „ ..	1	—	1	—
45 and over ..	—	—	—	—
Total, 1931 ..	31	51	82	1
Total, 1930 ..	131	176	307	1
Total, 1929 ..	313	344	757	2
Total, 1928 ..	65	51	116	—
Total, 1927 ..	54	62	116	1

The following Table shows the percentage of Scarlet Fever removals in Wards, 1931 :—

TABLE 47.

<i>Ward.</i>						1930 <i>Percentage.</i>	1931 <i>Percentage</i>
St. Stephen's	..	..	..	..	..	77·1	100·0
Trinity	..	..	..	..	..	84·6	100·0
St. Michael's	..	..	..	..	..	95·6	100·0
St. John's	..	..	..	..	..	65·0	77·7
St. Silas's	..	..	..	..	..	80·0	38·4
St. Paul's	..	..	..	..	..	70·0	66·6
St. Peter's	..	..	..	..	..	100·0	50·0
St. Mary's	..	..	..	..	..	100·0	100·0
St. Matthew's	..	..	..	..	..	95·1	100·0
St. Thomas's	..	..	..	..	..	76·0	60·0
Park	..	..	..	..	..	86·6	50·0
St. Luke's	..	..	..	..	..	87·5	100·0
St. Mark's	..	..	..	..	..	85·0	100·0
St. Andrew's	..	..	..	..	..	76·3	66·6
<b>TOTAL</b>	..	..	..	..	..	83·3	79·0

Monthly Admissions of Scarlet Fever Cases to the Corporation Hospital during 1931 :—

TABLE 48.

1930. 1931.

<i>Month.</i>	<i>Cases Notified.</i>	<i>Cases Removed.</i>	<i>Percentage of Removals.</i>	<i>Cases Notified.</i>	<i>Cases Removed.</i>	<i>Percentage of Removals.</i>
January ..	73	56	76·7	2	1	50·0
February .	39	34	87·1	6	4	66·6
March ..	43	38	88·3	2	1	50·0
April ..	24	21	87·5	3	1	33·3
May ..	24	22	91·6	3	2	66·6
June ..	54	45	83·3	11	8	72·7
July ..	22	19	86·3	10	8	80·0
August ..	12	7	58·3	5	4	80·0
September ..	11	8	72·7	13	12	92·3
October ..	10	10	100·0	5	4	80·0
November ..	7	5	71·4	13	11	84·6
December ..	23	20	86·9	8	8	100·0
<b>TOTAL ..</b>	<b>342</b>	<b>285</b>	<b>83·3</b>	<b>81</b>	<b>64</b>	<b>79·0</b>



Cases of scarlet fever are removed to Hospital on request by the general practitioner in charge of the case. Such request is invariably reserved for cases where home isolation or nursing presents difficulty.

### DIPHTHERIA.

Fifty-six cases, of which six were from outside the Borough, were admitted to Hospital during 1931.

Fourteen of these cases proved not to be diphtheria, but were suffering from the undermentioned conditions :—

Scarlet Fever	...	...	..	..	...	2
Tonsillitis	...	...	...	..	...	3
Streptococcal Septicæmia			...	...	...	1
Laryngitis	...	...	...	.	...	1
Stomatitis	...	...	...	...	...	1
Septic Throat	...	...	...	...	...	1
Quinsy	...	...	...	...	...	1
Broncho Pneumonia	...	...	..	..		2
Diphtheria Carrier	...	...	...	...		1
No appreciable disease	...	...	...	...		1
					—	
					14	
					—	

The following is an analysis of the cases admitted as diphtheria :—

TABLE 49.

Day of Disease on Admission	AGE GROUPS					TYPES OF DIPHTHERIA						COMPLICA- TIONS.					SENT INTO HOSPITAL AS DIPHTHERIA, BUT PROVED TO BE:										Total Deaths	
	0-5	5-10	10-15	15-20	20+	Faucial	Fauco-Palatal	Fauco-Pharyngeal	Fauco-Pharyngo-Laryngeal	Nasal Laryngeal	Aural	Nasal Phonation	Cardiac Irregularity	Serum Rash	Pneumonia (Bronchio)	Tracheotomy	Scarlet Fever	Tonsillitis	Streptococcal Septicæmia	Laryngitis	Stomatitis	Septic Throat	Quinsy	Br. Pneumonia	Diphtheria Carrier	No Appreciable Disease		
1	-	2	1	-	-	2	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1
2	2	1	1	2	1	3	-	-	-	1	2	-	3	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1
3	2	5	-	4	5	10	-	1	1	-	1	2	1	1	-	1	1	2	-	-	-	-	-	-	-	-	-	1
4	5	3	2	2	2	4	1	3	-	1	1	2	2	3	1	-	1	1	-	-	-	1	1	1	-	-	-	2
5	-	-	-	1	3	4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
6	1	2	-	1	-	2	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	1
7 +	1	3	-	2	2	1	-	1	-	2	1	-	-	1	-	1	-	-	1	-	1	-	-	1	-	-	-	1
TOTALS	11	16	4	12	13	26	1	5	1	2	6	1	4	7	8	1	2	2	3	1	1	1	1	2	1	1	1	3

Two of the deaths were in respect of patients admitted as cases of diphtheria, but who, in fact, were suffering from streptococcal septicæmia and broncho-pneumonia respectively.

During the year six cases of laryngeal diphtheria were admitted to the Corporation Hospital. Tracheotomy was necessary in two cases, both of which recovered.

**TABLE 50.****INCIDENCE OF DIPHTHERIA CASES ADMITTED TO HOSPITAL**

<i>Ages.</i>	<i>Males.</i>	<i>Females.</i>	<i>Totals.</i>	<i>Deaths.</i>
Under 1 year .. ..	1	—	1	—
1—2 years .. ..	—	2	2	1
2—3 years .. ..	1	1	2	—
3—4 years .. ..	2	1	3	—
4—5 years .. ..	2	2	4	1
5—10 years .. ..	9	5	14	—
10—15 years .. ..	3	1	4	—
15—25 years .. ..	7	9	16	—
25—35 years .. ..	1	2	3	—
35 years and over ..	1	6	7	1
TOTALS, 1931 .. ..	27	29	56	3
TOTALS, 1930 .. ..	60	81	141	13
TOTALS, 1929 .. ..	76	111	187	17
TOTALS, 1928 .. ..	54	74	128	13

The following Table shows the percentage of Diphtheria removals in Wards, 1931 :—

**TABLE 51.**

<i>Ward.</i>						1930 <i>Percentage.</i>	1931 <i>Percentage.</i>
St. Stephen's .. ..	..	..	..	..	..	91·6	80·0
Trinity .. ..	..	..	..	..	..	83·3	100·0
St. Michael's .. ..	..	..	..	..	..	83·3	33·3
St. John's .. ..	..	..	..	..	..	100·0	100·0
St. Silas's .. ..	..	..	..	..	..	90·0	75·0
St. Paul's .. ..	..	..	..	..	..	90·0	100·0
St. Peter's .. ..	..	..	..	..	..	100·0	100·0
St. Mary's .. ..	..	..	..	..	..	75·0	100·0
St. Matthew's .. ..	..	..	..	..	..	100·0	75·0
St. Thomas's .. ..	..	..	..	..	..	100·0	71·4
Park .. ..	..	..	..	..	..	100·0	100·0
St. Luke's .. ..	..	..	..	..	..	100·0	0·0
St. Mark's .. ..	..	..	..	..	..	100·0	100·0
St. Andrew's .. ..	..	..	..	..	..	100·0	100·0
TOTAL .. ..	..	..	..	..	..	94·0	87·7

TABLE 52.

The monthly incidence of Diphtheria in Blackburn was :—

<i>Month.</i>	1930.			1931.		
	<i>Cases Notified.</i>	<i>Cases Removed.</i>	<i>Percentage of Removals.</i>	<i>Cases Notified.</i>	<i>Cases Removed.</i>	<i>Percentage of Removals.</i>
January .. ..	20	16	80·0	6	5	83·3
February .. ..	21	20	95·2	5	5	100·0
March .. ..	16	15	93·7	2	2	100·0
April .. ..	12	12	100·0	7	7	100·0
May .. ..	7	7	100·0	1	1	100·0
June .. ..	12	12	100·0	3	3	100·0
July .. ..	2	2	100·0	8	4	50·0
August .. ..	6	5	83·3	9	9	100·0
September .. ..	8	8	100·0	2	2	100·0
October .. ..	5	5	100·0	3	3	100·0
November .. ..	5	5	100·0	4	2	50·0
December .. ..	19	18	94·7	7	7	100·0
TOTAL .. ..	133	125	94·0	57	50	87·7

TABLE 53.

## ENTERIC FEVER.

<i>Age Period.</i>	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>	<i>Deaths.</i>
Under 10 years .. ..	—	—	—	—
10—15 years .. ..	—	—	—	—
15—25 years .. ..	—	—	—	—
25—35 years .. ..	—	—	—	—
35—45 years .. ..	1	1	2	1
45 and upwards .. ..	—	—	—	—
TOTAL .. ..	1	1	2	1

## OTHER DISEASES.

TABLE 54.

AGE PERIODS.

<i>Disease.</i>	0—1		1—2		2—5		5—15		15—25		25—35		35—45		45 & up		Total	Deaths
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Cerebro-Spinal Meningitis .. ..	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1
Gastro-Enteritis .. ..	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	1
Puerperal Fever .. ..	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2	—
Puerperal Pyrexia .. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas .. ..	—	—	—	—	—	—	2	—	1	—	—	2	1	—	4	10	2	2
Chickenpox .. ..	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Ophthalmia Neonatorum .. ..	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—
Encephalitis Lethargica .. ..	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	2	2	2
Meningitis .. ..	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
No Disease .. ..	1	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	4	—
Mumps .. ..	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	2	—
Other Diseases .. ..	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	—
	2	3	—	1	—	1	2	1	1	5	—	3	2	2	1	4	28	7

TABLE 55.

OUT OF BOROUGH CASES.

<i>Disease.</i>	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>	<i>Deaths.</i>
Scarlet Fever.. ..	5	13	18	—
Diphtheria .. ..	3	3	6	—
Enteric Fever .. ..	—	1	1	1
Erysipelas .. ..	—	2	2	—
Cerebro Spinal Meningitis .. ..	—	1	1	1
TOTAL .. ..	8	20	28	2

TABLE 56.

## ADMISSIONS FROM THE BLACKBURN ROYAL INFIRMARY.

<i>Disease.</i>	<i>Male.</i>	<i>Female</i>	<i>Total</i>	<i>Deaths</i>
Scarlet Fever ... ..	2	—	2	—
Diphtheria ... ..	—	1	1	—
TOTAL ... ..	2	1	3	—

## ADMISSIONS FROM QUEEN'S PARK HOSPITAL.

<i>Disease</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Deaths</i>
Scarlet Fever ... ..	1	1	2	—
Diphtheria ... ..	3	—	3	—
TOTAL ... ..	4	1	5	—

Cases from the Blackburn and East Lancashire Royal Infirmary and Queen's Park Hospital are included in the Out-of-the-Borough Table, if the cases were not Blackburn residents.



## BACTERIOLOGICAL EXAMINATIONS.

## AT THE CORPORATION HOSPITAL.

TABLE 57.

<i>Examination and Material.</i>	1931						1930
	<i>Positive</i>	<i>Negative</i>		<i>Total</i>		<i>Total</i>	
For Diphtheria Bacilli :—							
<i>Swabs—</i>							
Private Practitioners ... ..	15	...	166	...	181	...	357
Hospital ... ..	38	...	183	...	221	...	350
Other ... ..	1	...	305	...	306	...	13
For Tubercle Bacilli :—							
<i>Sputum—</i>							
Private Practitioners ... ..	27	...	138	...	165	...	168
Hospital ... ..	107	...	218	...	325	...	319
Tuberculosis Dispensary ...	85	...	342	...	427	...	456
Examination of Urine, Pus, etc. :—							
Private Practitioners ... ..	0	...	4	...	4	...	0
Hospital ... ..	0	...	9	...	9	...	4
Tuberculosis Dispensary ...	0	...	4	...	4	...	0
Totals ... ..	273	...	1369	...	1642	...	1667

Examinations at the Public Health Laboratories, Liverpool and Manchester, are contained in Part VIII of the Report.

## DISINFECTION.

## Number of Rooms Sprayed :—

Tuberculosis .. .. .	238
Fever .. .. .	198
Vermin .. .. .	105
Institutions .. .. .	132
Schools .. .. .	30
Others .. .. .	140

Articles Disinfected by Steam .. .. . 6226

Number of Articles Destroyed by Consent of Owners .. .. . 473

## Amount of Disinfectant Distributed :—

Chloros .. .. .	(Gallons)	{	Schools ..	173½
			Houses ..	71
Persons Cleansed at Disinfection Station .. .. .				46
Cleansings ... .. .				220
Library Books Fumigated .. .. .				85
Private Books Fumigated .. .. .				14
School Books Fumigated .. .. .				8

## CLEANSING OF PERSONS.

During 1931, 46 persons were dealt with at the Throstle Street Disinfecting and Cleansing Station. The conditions for which baths were given were as under :—

Verminous Conditions .. .. .	1
Scabies .. .. .	45

Thirty-four of the persons dealt with were referred from the School Medical Department. The total number of baths given was 220.

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*PART V.*

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Prevalence of,  
*and*  
Control over,  
Tuberculosis.

## TUBERCULOSIS.

## INCIDENCE AND MORTALITY.

During the year 210 cases of Tuberculosis, 160 Pulmonary and 50 Non-Pulmonary, were notified. In 1930 the notifications numbered 191 ; in 1929, 155 ; in 1928, 142 ; in 1927, 151 ; in 1926, 176 ; in 1925, 240 ; and in 1924, 150. The notification of Tuberculosis in the area has been fairly satisfactory and there have been no cases of wilful neglect or refusal to notify.

The number of deaths in 1931 from all forms of Tuberculosis was 115 ; Pulmonary Tuberculosis caused 97 deaths, and Non-Pulmonary Tuberculosis 18. Thirteen, or 11·3%, of the deaths from Tuberculosis were in respect of cases which had not been notified during life.

## RECORDS OF PREVIOUS YEARS.

<i>Deaths from Tuberculosis</i>	1931	1930	1929	1928	1927	1926	1925	1924
Pulmonary ... ..	97	105	114	82	96	106	90	85
Non-Pulmonary ... ..	18	18	13	21	14	10	20	26

The number of deaths from all forms of Tuberculosis is equivalent to a rate of 0·93 deaths per 1,000 living.

## MORTALITY RATE PER 1,000 LIVING COMPARED WITH THAT OF ENGLAND AND WALES.

	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921
Blackburn...	...0·93	0·97	1·01	0·82	0·88	0·93	0·86	0·86	0·96	0·81	0·78
England & Wales...	—	0·89	0·96	0·93	0·97	0·96	1·04	1·06	1·03	1·12	1·13

Perusal of the above Table shows that the death rate from all forms of Tuberculosis in Blackburn compares favourably with the corresponding rate for England and Wales.

Of the cases notified during the year 58 died, 38 of the deaths being from Pulmonary, nine from Non-Pulmonary disease, and one from a Non-Tubercular disease.

The appended Table gives the age-groups of the cases notified and of the deaths for the year 1931.

TABLE 58.

Age Periods.	New Cases				Deaths.			
	Pulmonary		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under one year ... ..	—	—	2	1	—	—	2	—
1—5 years ... ..	1	2	2	3	—	—	2	—
5—10 „ ... ..	4	2	9	6	1	—	2	1
10—15 „ ... ..	2	2	4	1	1	—	—	—
15—20 „ ... ..	9	11	7	3	4	3	2	—
20—25 „ ... ..	11	16	2	2	9	9	—	1
25—35 „ ... ..	11	21	1	2	9	10	1	—
35—45 „ ... ..	17	7	—	3	10	5	—	2
45—55 „ ... ..	20	9	—	—	8	9	—	1
55—65 „ ... ..	9	2	—	1	14	1	2	1
65 and upwards ... ..	4	—	—	1	2	2	—	—
Totals ... ..	88	72	27	23	58	39	11	7

Of cases notified during the year, the attack rate corresponds, in the case of males, to 2·06 per 1,000, and of females, to 1·41 per 1,000.

### THE TUBERCULOSIS SCHEME.

The Council has provided a Tuberculosis Dispensary in Duke Street, where afternoon sessions are held from 2-0 to 5-0 p.m., on Monday, Tuesday, Wednesday and Friday. For the convenience of those whose occupation prevents attendance at the afternoon consultations a Clinic is held every Tuesday evening, from 7-0 to 9-0 p.m. The Clinical Tuberculosis Officer, assisted by the Tuberculosis Nurse and Clerk, attends each session.

Close co-ordination obtains between the Tuberculosis Dispensary on the one hand and other branches of the Health Service, School Medical Department, and private practitioners on the other.

During the year practitioners have referred 161 cases for examination at the Dispensary, and the Tuberculosis Officer has held 240 consultations with practitioners.

Following examination at the Dispensary the majority of insured patients are referred to their panel practitioners for domiciliary treatment. Each quarter, the practitioners are requested to send their patients to the Dispensary, or, alternatively, to furnish the Administrative Tuberculosis Officer with a progress report.

In addition to clinical examination all cases attending the Dispensary for the first time undergo X-Ray examination and bacteriological investigation of the sputum is also performed. During the year 165 sputum examinations were undertaken for private practitioners, and 427 in respect of patients attending the Dispensary.

The Tuberculosis Nurse visits the homes of all notified cases and reports on home conditions, in addition, she advises all contacts to attend the Dispensary for examination.

During the year the Nurse made 4,394 home visits, 651 of which were in respect of ex-Service men.

Probably the most important duty of the Tuberculosis Nurse is to supervise home isolation of patients under domiciliary treatment. Unfortunately the housing conditions of many of these cases are such as render satisfactory home isolation a matter of grave difficulty.



The appended Table, which relates to persons who were at home during the last quarter of 1931, demonstrates the difficulty experienced in securing isolation of this type of case :—

TABLE 59.

	On First Visit.	After-wards.
No. who occupy a separate bedroom .. .. .	160	178
No. who occupy a separate parlour alone .. .. .	50	48
No. who occupied a kitchen alone .. .. .	4	3
No. who occupied a shelter in yard .. .. .	2	2
No. who occupied a separate bed in a room occupied by :—		
One other person .. .. .	45	45
Two other persons .. .. .	34	34
Three other persons .. .. .	27	25
Many other persons (Common Lodging House, &c.) ..	14	12
No. who occupied a bed in common with :—		
One other person .. .. .	83	71
Two other persons .. .. .	3	3
Two beds in a room :—		
Two persons in each bed .. .. .	6	6
Three persons in each bed .. .. .	1	1
<b>TOTAL</b> .. .. .	<b>429</b>	<b>429</b>

Where effective home isolation is impossible, or the domestic environment otherwise unsuitable, the Health and Housing Committee gives preferential treatment to tubercular applicants for Corporation houses, when applications are supported by the Medical Officer of Health.

By arrangement with the District Nursing Association, the Corporation provides home nursing for selected cases of patients under domiciliary treatment. During the year members of the District Nursing Staff paid 1,662 visits under this arrangement.

#### THE TREATMENT OF TUBERCULOSIS.

At the beginning of 1931 there were 435 Pulmonary and 135 Non-Pulmonary cases on the Dispensary Register.

The Tuberculosis Notification Register is a Register of all notified cases of Tuberculosis, whereas the Dispensary Register refers only to cases actually attending the Dispensary.

During the year 278 Pulmonary and 26 Non-Pulmonary cases were added to the Register, consequently 713 Pulmonary, and 161 Non-Pulmonary cases were dealt with during the year. At the end of the year there were 404 Pulmonary, and 105 Non-Pulmonary cases on the Register, 365 names having been removed in the course of the year by reason of cure (2), died of Tuberculosis (51), lost sight of (95), died of non-tuberculous disease (1), and removed to other towns (13); 203 Non-Tuberculous.

Of cases on the Register on December 31st, 1931, 44 were receiving no form of treatment. The majority of these were following their ordinary occupations.

Blackburn patients are admitted either to the Sanatorium Blocks at the Corporation Hospital, or to Meathop Sanatorium, Grange-over-Sands, where the Corporation reserves ten beds. The more advanced cases are received into the Corporation Hospital, the early cases, or those which have improved under treatment at the Corporation Hospital, being drafted to Meathop.

At the beginning of the year 34 males, 12 females, and one child were in-patients in the Sanatorium block; during the year 67 males, 64 females, and 16 children were admitted; on December 31st, 1931, 26 males, 10 females, and nine children were still undergoing treatment. In the course of the year 59 males, 47 females, and eight children were discharged. Sixteen males and 10 females died.

The appended Table shows the condition of patients on discharge from the Sanatorium Block:—

				<i>Disease</i>		<i>Much</i>			
				<i>Quiescent</i>		<i>Improved</i>	<i>No Change</i>		<i>Dead</i>
Males	...	...	...	—	...	48	...	11	...
Females	...	...	...	1	...	33	...	13	...
Children	...	...	...	—	...	7	...	1	...
				—		—		—	—
				1	...	88	...	25	...
				—		—		—	—

At the commencement of the year four males and five females were in-patients at Meathop Sanatorium, while during 1931, 17 males and three females were admitted. At the end of the year five males and five females remained at Meathop. The appended Table shows the condition of patients on discharge from Meathop :—

				<i>Disease</i> <i>Quiescent</i>	<i>Much</i> <i>Improved</i>			<i>No Change</i>	<i>Dead</i>	
Males	...	...	...	5	...	7	...	3	...	1
Females	...	...	...	1	...	1	...	0	...	1
				—		—		—		—
				6	...	8	...	3	...	2
				—		—		—		—

### NON-PULMONARY TUBERCULOSIS.

During the year 18 deaths were certified to be due to Non-Pulmonary Tuberculosis, compared with 18 in 1930, 13 in 1929, 21 in 1928, 14 in 1927, 10 in 1926, 24 in 1925, and 26 in 1924. The deaths were due to :—

						<i>Male.</i>	<i>Female.</i>
Tuberculous Meningitis	..	..	..	..	..	5	2
Tuberculous Peritonitis	..	..	..	..	..	1	1
Tubercle of Kidney	..	..	..	..	..	0	1
Bone and Joint Tuberculosis	..	..	..	..	..	3	1
T.B. Adenitis	..	..	..	..	..	1	1
Tuberculosis of Bladder	..	..	..	..	..	0	1
T.B. Caecum and Ascending Colon	..	..	..	..	..	1	0

Fifty cases of Non-Pulmonary Tuberculosis were notified. The diagnoses were :—

						<i>Male.</i>	<i>Female.</i>
Tuberculous Glands of Neck	..	..	..	..	..	6	7
Abdominal Tuberculosis	..	..	..	..	..	7	2
Meningitis	..	..	..	..	..	3	2
Tuberculous Joint Disease	..	..	..	..	..	1	3
Tuberculous Bone Disease	..	..	..	..	..	6	5
Mediastinal Glands	..	..	..	..	..	1	0
Tuberculous Kidney	..	..	..	..	..	0	2
Lupus	..	..	..	..	..	2	1
Testis	..	..	..	..	..	1	0
Psoas Abscess	..	..	..	..	..	0	1

### BONE AND JOINT TUBERCULOSIS.

Eighteen cases of bone or joint tuberculosis were examined by Dr. Briggs at the Special Orthopædic Clinic.

### DENTAL TREATMENT OF TUBERCULOSIS PATIENTS.

The following Table gives details of Dental work carried out as part of the Tuberculosis Scheme :—

The Dental Surgeons carried out the following work in 1931 :—

Number of Patients	..	..	..	..	..	22
Permanent Teeth extracted	..	..	..	..	..	25
Temporary Teeth extracted	..	..	..	..	..	9
Permanent Teeth Filled	..	..	..	..	..	5
Other Operations	..	..	..	..	..	4
Number of Sessions held	..	..	..	..	..	11

The following treatment was carried out at Meathop Sanatorium by the Dental Surgeon attached to that Institution. The cost of this treatment was borne by the Health Committee; in some cases a part of the expense being refunded by the patients :—

Number of Patients Treated	..	..	..	..	4
Permanent Teeth extracted	..	..	..	..	10

### ULTRA-VIOLET LIGHT TREATMENT.

Particulars of the Ultra-Violet Light Treatment of Tuberculosis patients will be found in Table 87.

### PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS) REGULATIONS, 1925

It was not found necessary to take any action during the year under the above regulations relating to tuberculous employees in the milk trade.

### VOCATIONAL TRAINING.

It has been a matter of difficulty to provide suitable vocational training for the tubercular patients undergoing treatment at the Corporation Hospital by reason of various factors, chief of which are :—

- (1) Although ample land is available in the Hospital grounds, that on the eastern and northern boundaries cannot be utilised by the tubercular patients owing to the proximity of wards housing infectious patients ;
- (2) Many of the patients are not “ sanatorium,” but “ hospital ” cases, who would derive but small benefit from vocational training.

The desirability of providing some form of vocational training has been long appreciated by members of the Hospital Sub-Committee who, after careful consideration, have formulated a scheme whereby selected patients will be trained in poultry keeping. The Committee has now made arrangements for an ex-patient to undergo a course of instruction, on the completion of which he will return to the Hospital as an instructor, and be responsible, under the general supervision of the head gardener, for the training of suitable patients. It is proposed that, on the completion of training, each trainee be provided at cost price with stock to be reared at the Hospital.

No initial difficulty should be experienced in finding a ready market for the produce of both the Hospital farm and of farms to be subsequently founded by trainees. In fact, for the first two or three years the Corporation Hospital and the Springfield Maternity Home will offer an outlet more than sufficient for the produce available.

The project, in so far as the Health Committee is concerned, should be entirely self-supporting; the success, or otherwise, of the trainees will be determined by their initiative, industry and resource.

The utility of the scheme is obvious, as it will provide the trainees with a healthful and interesting occupation which, if properly pursued, will be one of some profit.

The best thanks of the Committee are due to Mr. Schofield, of the Shadsworth Poultry Farm, who has offered to undertake the training of the proposed instructor.







## PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1924.

Number of cases of Tuberculosis remaining on the Register of Notifications kept by the Medical Officer of Health of the County Borough on the 31st December, 1931.

TOTAL CASES.	PULMONARY.			NON-PULMONARY.		
	Males	Females	Total.	Males	Females	Total
647	267	190	457	105	85	190

This shows a decrease of 16 in the total number ; which comprises an increase of five pulmonary, and a decrease of 21 non-pulmonary.

TABLE 61.

(FORM T. 145 OF THE MINISTRY OF HEALTH).

## TUBERCULOSIS DISPENSARY—WORK CARRIED OUT DURING THE YEAR 1931.

## PART "A"

DIAGNOSIS	PULMONARY				NON-PULMONARY				TOTAL				GRAND TOTAL	
	Ad'ls		Chil'n		Ad'ls		Chil'n		Ad'ls		Chil'n			
	M	F	M	F	M	F	M	F	M	F	M	F		
A.—New Cases examined during the year (excluding contacts) :														
(a) Definitely tuberculous ...	39	36	5	3	8	4	10	4	47	40	15	7	109	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	11	11	5	5	32	
(c) Non-tuberculous ... ..	—	—	—	—	—	—	—	—	41	28	23	25	117	
B.—Contacts examined during the year :														
(a) Definitely tuberculous ...	2	—	—	—	—	—	—	—	2	—	—	—	2	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	—	2	1	1	4	
(c) Non-tuberculous ... ..	—	—	—	—	—	—	—	—	5	7	11	12	35	
C.—Cases written off the Dispensary Register as :—														
(a) Recovered ... ..	1	—	—	—	—	—	1	—	1	—	1	—	2	
(b) Non tuberculous (including any such cases previously diagnosed and entered on the Dispensary register as tuberculous) ... ..	—	—	—	—	—	—	—	—	58	48	50	47	203	
D.—Number of Persons on Dispensary Register on Dec. 31st :														
(a) Diagnosis completed ... ..	198	122	27	21	21	17	46	21	219	139	73	42	473	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	11	13	6	6	36	

1.—Number of Cases on Dispensary Register on January 1st	...	...	...	570
2.—Number of Cases Transferred from other Areas and Cases returned after Discharge under Head 3 in previous years...	...	...	...	5
3.—Number of Cases Transferred to other Areas, cases not desiring further assistance under Scheme and cases "lost sight of"	...	...	...	108
4.—Cases written off during year as Dead (all causes)...	...	...	...	52
5.—Number of Attendances at the Dispensary (including Contacts)	...	...	...	3221
6.—Number of Insured Persons under Domiciliary Treatment on 31st December...	...	...	...	189
7.—Number of Consultations with Medical Practitioners : (a) Personal	...	...	...	46
(b) Other	...	...	...	194
8.—Number of Visits by Tuberculosis Officer to homes (including personal consultations)...	...	...	...	48
9.—Number of Visits by Nurses or Health Visitors to Homes for Dispensary Purposes	...	...	...	4394
10.—Number of :—(a) Specimens of sputum, etc., examined...	...	...	...	696
(b) X-Ray Examinations made in connection with Dispensary work	...	...	...	772
11.—Number of "Recovered" Cases restored to Dispensary Register	...	...	...	—
12.—Number of "T.B. Plus" Cases on Dispensary Register on December 31st	...	...	...	184

**TABLE 62. (FORM T. 145 OF THE MINISTRY OF HEALTH)**  
**RESULTS OF TREATMENT.**

PART "G."

Classification on Admission to the Institution	Condition at time of Discharge	DURATION OF RESIDENTIAL TREATMENT IN THE INSTITUTION												GRAND TOTALS
		Under 3 months.			3-6 months			6-12 months			More than 12 months			TOTALS
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Class T.B. Minus. ...	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	5 ... 1	... 4 ...	... 1 ...	1 5 1	2 ... 1	... ... ...	2 ... ...	3 ... ...	2 ... ...	... ... ...	5 4 1	2 ... ...	15 10 3
Class T.B. plus. Group I. ... ..	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	1 2 ...	3 4 ...	... ... ...	2 3 ...	... 1 ...	... ... ...	1 2 ...	... 1 ...	... ... ...	5 9 1	3 7 ...	... ... ...	8 16 1
Class T.B. plus. Group II. ... ..	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	... 7 7	... 5 3	... ... ...	2 3 1	3 1 1	... ... ...	11 8 ...	1 2 ...	1 ... ...	1 1 1	14 18 8	7 9 5	21 27 13
Class T.B. plus. Group 3. ... ..	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	2 5 6	2 3 3	... ... ...	... 2 ...	2 ... 1	... ... ...	3 ... ...	2 1 1	... ... ...	... ... ...	5 7 6	6 4 5	11 11 11
Bones and Joints... ..	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...
Abdominal ... ..	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	1 ... ...	... ... ...	... ... ...	... 1 ...	... 1 ...
Other Organs ... ..	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...
Peripheral Glands ...	Quiescent ... .. Not Quiescent ... .. Died in Institution ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	1 ... ...	... ... ...	... ... ...	... ... ...	1 ... ...	... ... ...	1 ... ...

PULMONARY TUBERCULOSIS. NON-PULMONARY TUBERCULOSIS.

TABLE 63.

(FORM T. 145 OF THE MINISTRY OF HEALTH).

PART "C."—NUMBER OF BEDS AVAILABLE FOR THE TREATMENT OF TUBERCULOSIS ON THE  
31ST DECEMBER IN INSTITUTIONS BELONGING TO THE COUNCIL.

NAME OF INSTITUTION	FOR PULMONARY CASES		FOR NON PULMONARY CASES		TOTAL
	Adults	Children	Adults	Children	
CORPORATION HOSPITAL... ..	55	4	...	6	65
MEATHOP SANATORIUM ... ..	10	...	...	...	10

TABLE 64.

PART "D."—RETURN SHOWING EXTENT OF RESIDENTIAL TREATMENT DURING THE  
YEAR 1931.

		In Institu- tions on Jan. 1st	Admitt'd during the year	Dis- charged during the year	Died in the Institu- tions	In Institu- tions on Dec. 31st.
Doubtfully Tuberculous Cases Admitted for Observation	Adult Males ...	1	13	11	...	3
	Adult Females.	3	10	10	...	3
	Children... ..	1	8	5	...	4
	Total ... ..	5	31	26	...	10
Definitely Tuberculous patients admitted for Treatment ... ..	Adult Males ...	37	80	72	17	28
	Adult Females.	14	63	45	11	21
	Children... ..	...	9	4	...	5
	Total ... ..	51	152	121	28	54
GRAND TOTAL ...		56	183	147	28	64

TABLE 65. (FORM T. 145 OF THE MINISTRY OF HEALTH).

## PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1931.					1931.					
				Class T.B. minus	Class T.		B. p	lus.	Class T.B. minus	Class T.		B. p	lus.	
					Group 1	Group 2				Group 3	Total (Class T.B. plus)			Group 1
(a) Remaining on Dispensary Register on 31st December.	DISEASE ARRESTED ...	Adults	M.	25	2	13	1	16	...	...	...	...	...	
			F.	19	4	4	1	9	...	...	...	...	...	
		Children	14	...	...	...	...	...	...	...	...	...		
	DISEASE NOT ARRESTED .	Adults	M.	29	12	33	15	60	12	7	5	8	20	
			F.	19	7	20	6	33	9	7	6	6	19	
		Children	7	1	1	...	2	5	...	2	...	2		
	Condition not ascertained during year ... ..				45	8	10	6	24	...	...	...	...	...
	Total on Dispensary Register on December 31st ... ..				158	34	81	29	144	26	14	13	14	41
	(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered	Adults	M.	18	...	1	...	1	...	...	...	...	...
				F.	15	...	...	...	...	...	...	...	...	...
Children			5	...	1	...	1	...	...	...	...	...		
Lost sight of or otherwise removed from Dispensary Register... ..				518	95	56	30	181	1	1	...	...	1	
Dead... ..		Adults	M.	49	31	79	233	343	...	...	3	4	7	
			F.	44	32	92	177	301	...	1	3	3	7	
		Children	32	7	32	54	93	...	...	...	...	...		
Total written off Dispensary Register ... ..				681	165	261	494	920	1	2	6	7	15	
GRAND TOTALS ... ..				839	199	342	523	1064	27	16	19	21	56	





TABLE 66.

TABLE SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM THE BLACKBURN CORPORATION HOSPITAL DURING 1931.

PULMONARY TUBERCULOSIS.—Duration of Residential Treatment.																	
Condition at time of Discharge.		Under 3 months						3-6 months.			6-12 months			More than 12 months.			TOTAL
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.				
CLASS A. Cases in which Tubercle Bacilli have never been found ... ..	Quiescent ... ..	5	—	—	1	2	—	—	2	—	—	—	—	—	—	12	
	Not Quiescent ... ..	—	4	1	3	—	—	—	—	—	—	—	—	—	—	8	
	Died in Institution ... ..	1	—	—	1	1	—	—	—	—	—	—	—	—	—	3	
CLASS B 1 Early cases in which Tubercle Bacilli have been found ... ..	Quiescent ... ..	1	3	—	—	—	—	—	—	—	1	—	—	—	—	6	
	Not Quiescent ... ..	1	4	—	3	1	—	—	1	—	2	1	—	—	—	15	
	Died in Institution ... ..	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	
CLASS B 2 Intermediate Cases in which Tubercle Bacilli have been found ... ..	Quiescent ... ..	—	2	—	2	3	—	—	—	—	11	1	—	—	—	20	
	Not Quiescent ... ..	5	5	—	2	1	—	—	2	—	6	2	—	—	—	22	
	Died in Institution ... ..	6	2	—	1	1	—	—	1	—	—	1	—	—	—	11	
CLASS B 3 Advanced cases in which Tubercle Bacilli have been found ... ..	Quiescent ... ..	2	2	—	—	2	—	—	—	—	3	2	—	—	—	11	
	Not Quiescent ... ..	3	3	—	1	—	—	—	1	—	—	1	—	—	—	8	
	Died in Institution ... ..	6	3	—	—	1	—	—	1	—	—	1	—	—	—	11	
TOTAL ... ..		30	28	1	14	12	—	—	11	2	5	2	—	—	—	128	

OBSERVATION CASES.	DIAGNOSIS ON DISCHARGE FROM OBSERVATION	STAY UNDER FOUR WEEKS				STAY OVER FOUR WEEKS				TOTAL
		M.	F.	Ch.		M.	F.	Ch.		
Tuberculous ... ..	Non-Tuberculous ... ..	4	5	1		3	1	1		15
		...	2	...		2	...	3		7
		2	...	...		...	2	...		4
TOTAL ... ..		6	7	1		5	3	4		26



TABLE 68.

SHOWING THE EXTENT OF RESIDENTIAL TREATMENT FOR PULMONARY TUBERCULOSIS DURING 1931.

		In Institutions on Jan. 1st.	Admitted during 1931.	Discharged during 1931.	Died in the Institutions.	In Institutions on Dec. 31st, 1931.
Meathop Sanatorium ...	Adults	M.	17	15	1	5
		F.	3	3	—	5
	Children	M.	—	—	—	—
		F.	—	—	—	—
Corporation Hospital. ...	Adults	M.	67	59	16	26
		F.	64	47	10	19
	Children	M.	8	4	—	5
		F.	8	4	—	4
Residential Open-Air School. ...	Children	M.	—	—	—	—
		F.	—	—	—	—
TOTAL ...	...	56	167	132	27	64

TABLE 69.

CONDITION AT END OF 1931 OF PATIENTS TREATED AT AND DISCHARGED  
FROM THE BLACKBURN CORPORATION HOSPITAL.

Year Dis- charged	At full work. No Symp- toms 1	At full work, but with difficulty 2	Not able to work full time owing to ill health. 3	Not able to work but able to get about 4	Confined to the house 5	Confined to bed 6	Died (not in the In- stitution at time of first admis- sion). 7	Cannot trace 8	Total. 9
1913	15	—	—	3	1	—	42	30	91
1914	12	—	—	1	—	—	36	19	68
1915	5	—	—	1	—	—	58	9	73
1916	3	1	—	—	—	—	46	6	56
1917	6	—	1	1	—	—	29	1	38
1918	10	—	1	2	—	—	38	6	57
1919	17	2	1	2	1	—	46	4	73
1920	16	—	—	5	2	—	46	4	73
1921	17	3	1	5	1	—	45	5	77
1922	25	2	1	7	3	1	53	11	103
1923	31	3	—	7	2	2	64	14	123
1924	13	3	1	7	2	—	63	12	101
1925	12	4	3	10	4	1	51	18	103
1926	7	3	3	4	1	1	26	10	55
1927	14	3	1	1	2	2	13	9	45
1928	4	3	1	7	—	3	22	2	42
1929	2	2	2	7	2	—	15	1	31
1930	3	5	6	15	5	3	19	4	60
1931	2	7	17	56	11	2	16	3	114
Total..	214	41	39	141	37	15	728	168	1383
%	15.5	3.0	2.8	10.3	2.5	1.1	52.6	12.2	—

TABLE 70.

CONDITION AT END OF 1931 OF PATIENTS TREATED AT AND DISCHARGED  
FROM MEATHOP SANATORIUM.

Year Dis- charged.	At full work. No Sym- ptoms. 1	At full work, but with difficulty 2	Not able to work full time owing to ill health 3	Not able to work but able to get about 4	Confined to the house. 5	Confined to bed. 6	Dead 7	Can- not trace 8	Total. 9
1909 and previous	—	—	—	—	—	—	12	8	20
1910	—	—	—	—	—	—	19	4	23
1911	—	—	—	2	—	—	14	1	17
1912	—	—	—	—	—	—	16	3	19
1913	9	—	—	1	1	—	13	12	36
1914	13	1	—	—	—	—	12	12	38
1915	6	—	—	—	—	—	12	14	32
1916	9	—	1	—	—	—	15	5	30
1917	10	—	1	1	—	—	20	4	36
1918	6	—	1	6	—	—	23	4	40
1919	13	2	—	2	—	1	18	12	48
1920	15	—	1	3	—	—	17	6	42
1921	16	2	1	1	1	1	11	9	42
1922	7	—	—	—	—	—	11	4	22
1923	3	—	3	1	—	2	9	6	24
1924	3	1	—	4	—	—	12	6	26
1925	4	—	1	1	3	—	14	2	25
1926	5	—	—	4	1	—	9	7	26
1927	4	—	1	5	1	1	4	3	19
1928	—	2	2	4	2	1	7	1	19
1929	—	2	1	4	—	—	6	—	13
1930	—	2	4	3	—	1	10	1	21
1931	—	2	3	7	1	1	2	1	17
Total	123	14	20	49	10	8	286	125	635
%	19.2	2.2	3.2	7.7	1.6	1.3	45.1	19.7	—



TABLE 71.

## SUMMARY OF DISPENSARY STATISTICS AND OF HOME VISITING.

	1931	1930
Number of persons placed under observation for purpose of diagnosis .. .. .	80	75
Number of persons for whom the period of observation exceeded two months .. .. .	14	10
Number of visits paid by the Tuberculosis Officer to the homes of patients .. .. .	94	61
Number of visits paid by Nurses to the homes of patients for dispensary purposes .. .. .	4394	4994
Number of attendances of patients at the Dispensary :—		
Insured .. .. .	2101	2190
Not Insured .. .. .	1120	1266
Total .. .. .	3221	3456
Number of patients under Domiciliary Treatment :—		
Pulmonary .. .. .	157	135
Non-Pulmonary .. .. .	36	32
Total .. .. .	193	167
Number of reports received from practitioners in respect of patients on Domiciliary Treatment .. .. .	88	104
Number of specimens of sputum examined in connection with the work of the Dispensary :—		
Positive .. .. .	85	147
Negative .. .. .	342	309
Total .. .. .	427	456
Number of houses disinfected during the year :—		
(i) On removal of patient to Hospital ..	131	108
(ii) On death .. .. .	47	60
(iii) On changing address.. .. .	8	7
Number of Reports made to Local War Pensions Committee by the Tuberculosis Officer on general progress and capacity for work of Tuberculous Discharged ex-Service men .. .. .	67	74



*PART VI.*

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Venereal Diseases.

## VENEREAL DISEASES.

The arrangements for the treatment of Venereal Disease are the same as in 1930. Two Centres are provided, one, for both male and female patients, is at the Royal Infirmary, and the other, which is at the Health Department, is an "innocent" clinic for Maternity and Child Welfare cases maritally or parentally infected.

The treatment of male patients is carried out by Dr. Cran Duthie, and that of females by Dr. Baird.

The Local Authority has an arrangement with both the Manchester Public Health Laboratory and the Blackburn and East Lancashire Royal Infirmary for the examination of pathological material.

### *(a) The Royal Infirmary Centre :*

Six hundred and fifty-three patients, of whom 325 were Blackburn residents, attended this Centre for the first time during the year. Of the Blackburn cases, 94 were suffering from gonorrhœa, 51 from syphilis, and 180 from conditions non-venereal.

The appended Table shows the number of new cases seen yearly at the Royal Infirmary since 1922.

<i>Year.</i>		<i>Male.</i>		<i>Female.</i>		<i>Total.</i>
1922	..	258	..	155	..	413
1923	..	264	..	154	..	418
1924	..	243	..	148	..	391
1925	..	225	..	131	..	356
1926	..	260	..	144	..	404
1927	..	300	..	103	..	403
1928	..	349	..	291	..	640
1929	..	380	..	251	..	631
1930	..	365	..	265	..	630
1931	..	384	..	269	..	653

The above figures are not to be accepted as representing the true incidence of venereal disease in Blackburn. Venereal diseases, though infectious, are nevertheless non-notifiable; consequently our present methods of ascertainment, through the treatment centres and death returns, are of necessity incomplete and misleading.

The total number of attendances for all patients was 21,565, 14,038 of which were in respect of Blackburn residents. The aggregate number of in-patient days at the Royal Infirmary was 158 for Blackburn cases, and 253 for cases from other sources.

During the year 75 males and 39 females ceased to attend the Clinic before completion of the full course, and three cases, all males, discontinued attendance after completion of treatment, but before final tests for cure had been carried out.

These figures show a large improvement over those for previous years and prove that, as a result of energetic propaganda, persons suffering from venereal disease are becoming more appreciative of the importance of complete and thorough treatment.

*(b) The Victoria Street Centre :*

This centre is for the treatment of women maritally infected, and of children congenitally or accidentally infected. The Clinic forms part of the Maternity and Child Welfare Scheme, and all cases referred for treatment have passed through the Welfare Centres.

Many of these maritally-infected women, though unwilling to attend the Royal Infirmary Clinic, are quick to avail themselves of the facilities offered at the Health Office Centre.

At the beginning of the year two males and 11 females were under treatment for syphilis and 37 females for gonorrhœa. In the course of the year the following cases were dealt with for the first time :—Syphilis, 30 ; gonorrhœa, 76 ; 55, non-venereal conditions. The total number of attendances made was 1,075, compared with 1,442 attendances in 1930.

During the year 39 patients ceased to attend before completion of treatment, and one ceased to attend after completion of treatment but before the final test for cure had been carried out. These figures present a great improvement over the corresponding figures of 61 and two respectively for 1930.







TABLE 72—Continued.

14. Chief preparations used in treatment of Syphilis :—		Arsenobenzene Compounds		Mercury	Bismuth
(a)	Names of preparations ... ..	Neokharsivan, Stabilaran, Sulfarsenol, Silver Salvarsan.	"Squire's" Mercurial Cream Pil. Hutchinson.		Bismothab
(b)	Total number of injections given (out-patients and in-patients) ... ..	2420	24		1326
(c)	Number of injections <i>included in (b)</i> given to patients who on first attendance at this Centre were suffering from primary and secondary syphilis ... ..	121	...		86
15. Are the tests recommended in Memo. V21 as amended by Memo. V21a followed in deciding as to the discharge of the patient after treatment and observation for syphilis and gonorrhoea ? ... ..					
If not, in what way are they modified ? ...					
Yes.					
There is no complement fixation test done for Gonorrhoea.					
16. PATHOLOGICAL WORK :—		MICROSCOPICAL		SERUM TESTS.	
(a)	Number of specimens examined at and by the medical officer of the treatment centre ... ..	for spirochetes	for gonococci	Wassermann	Others for syphilis for gonorrhoea
(b)	Number of specimens from patients attending at the centre sent for examination to an approved laboratory.	...	...	738	...

STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED  
ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings ... ..	Blackburn	Lancashire	Burnley	Warrington	Bury	Rochdale	Stockport	Salford	Preston	Total
A. Number of cases in Item 3 from each area found to be suffering from :—										
Syphilis ... ..	51	49	...	...	...	...	...	...	...	100
Soft Chancre ... ..	...	...	...	...	...	...	...	...	...	...
Gonorrhoea ... ..	94	115	1	1	...	...	...	...	...	211
Conditions other than venereal ... ..	180	162	...	...	...	...	...	...	...	342
TOTAL ... ..	325	326	1	1	...	...	...	...	...	653
B. Total number of attendances of all patients residing in each area ... ..	14038	7522	4	1	...	...	...	...	...	21565
C. Aggregate number of " In-patient days " of all patients residing in each area... ..	158	226	...	27	...	...	...	...	...	411
D. Number of doses of arsenobenzene com- pounds given in the out-patient Clinic and In-patient Department to patients residing in each area ... ..	1234	1186	...	...	...	...	...	...	...	2420

(Signed)

DOROTHEA I. BAIRD,  
W. CRAN DUTHIE,

Medical Officers of the Treatment Centre.

February 5th, 1932.





TABLE 73—Continued.

14. Chief preparations used in treatment of Syphilis :—			Arsenobenzene Compounds		Mercury		Bismuth
			Neok. Sulfarsenol		Pl. Hydrarg. Hyd. e Creta.		
(a) Names of preparations ... ..							Nil.
(b) Total number of injections given (out-patients and in-patients) ... ..			220		...		...
(c) Number of injections included in (b) given to patients who on first attendance at this Centre were suffering from primary and secondary syphilis ... ..			9		...		...
15. Are the tests recommended in Memo. V21 as amended by Memo. V21a followed in deciding as to the discharge of the patient after treatment and observation for syphilis and gonorrhœa ? ... ..							
If not, in what way are they modified ? ...			<p><i>Primary syphilis.</i>—If blood negative to begin with patient discharged ; if blood negative for two years from commencement of treatment without return of symptoms.</p> <p><i>Secondary syphilis.</i>—Patient discharged when blood negative two years after treatment ceased and after provocative dose of arsenobenzol. <i>Infants</i> : Discharged if no return of symptoms for two years after treatment ceased. <i>Gonorrhœa</i> : Discharged after three successive smears from Urethra and Cervix after menstrual period and provocative vaccine.</p>				
16. PATHOLOGICAL WORK :—			Microscopical		Serum Tests		
			for spirochetes	for gonococci	Wassermann	Others for syphilis	for gonorrhœa
(a) Number of specimens examined at and by the medical officer of the treatment centre ... ..			...	...	...	...	...
(b) Number of specimens from patients attending at the centre sent for examination to an approved laboratory.			...	218	52	...	...



STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED  
ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings ... ..	Blackburn	Langho	Total
A. Number of cases in Item 3 from each area found to be suffering from :—			
Syphilis ... ..	14	...	14
Soft Chancre ... ..	...	...	...
Gonorrhoea ... ..	14	...	14
Conditions other than venereal ... ..	54	1	55
TOTAL ... ..	82	1	83
B. Total number of attendances of all patients residing in each area ... ..	1068	7	1075
C. Aggregate number of " In-patient days " of all patients residing in each area... ..	...	...	...
D. Number of doses of arsenobenzene com- pounds given in the out-patient Clinic and In-patient Department to patients residing in each area ... ..	220	...	220

(Signed) DOROTHEA I. BAIRD,  
Medical Officer of the Treatment Centre.

30th January, 1932.

## BLACKBURN ROYAL INFIRMARY—V.D. Beds : Male 2 ; Female 2

## PARTICULARS OF STAFF.

	Duties.	If Employed Whole or Part-Time on Duties in V.D. Centre.
Medical Officers— Dr. W. Cran Duthie.	In charge of Male clinic.	Part-time.
Dr. D. I. Baird . . . . .	In charge of Female clinic . .	Part-time.
Resident Medical Officers . .	Assist at male clinics . . . .	Part-time.
Nurses—Two . . . . .	To prepare for and assist at clinics . . . . . Do irrigations, &c., and keep registers . . . . .	One whole time. One at female clinic only.
Male Attendants—Two . .	To prepare for and assist at male clinics. Do irrigations, &c., and general porter's work in connection with clinics.	One nearly whole-time and evenings and week-ends and one at clinics only.
Dispenser—One . . . . .	General Dispensing duties	Four clinics per week.
Clerk . . . . .	Preparation of statistical returns and general clerical duties . . . . .	Part-time.

Patients from Blackburn attended the following centres for treatment during the year :—

	<i>Gonorrhœa.</i>	<i>Non-Venereal</i>	<i>Syphilis.</i>
Preston . . . . .	2	...	...
Salford . . . . .	1	1	...
Stockport . . . . .	...	...	1
Rochdale . . . . .	...	1	...

*PART VII.*

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Maternity and Child  
Welfare.

## ANTE-NATAL WORK.

An Ante-Natal Clinie is conducted twice weekly, particulars of which will be found in the appended Table :—

TABLE 74.

## ANTE-NATAL CLINIC.

No. of Sessions held	...	...	...	...	...	...	99
No. of Attendances made	...	...	...	...	...	...	1936
No. of Individuals	...	...	...	...	...	...	697
No. of Normal Labours	...	...	...	...	...	...	377
No. of Abnormal Labours	...	...	...	...	...	...	56
No. Non-pregnant	...	...	...	...	...	...	145
No. Undelivered at End of 1931	..				...	...	119
Sent by Health Visitors	...	...	...	...	...	...	109
Sent by Matron, Springfield	...	...	...	...	...	...	146
Sent by Doctors	...	...	...	...	...	...	69
Sent by Midwives	...	...	...	...	...	...	70
Women who came on their own initiative				...	...	...	187
Sent by other patients, relatives and friends	...	...	...	...	...	...	72
Sent by Medical Officers	...	...	...	...	...	...	38
Sent by others	...	...	...	...	...	...	6
Primigravidæ Examined	...	...	...	...	...	...	218
Multigravidæ Examined	...	...	...	...	...	...	215
Multigravidæ undelivered at end of year	...	...	...	...	...	...	68

The 56 Abnormal Cases were as follows :—

Instrumental	...	...	...	20	Breech...	...	...	...	4
Still Births	...	...	...	21	Miscarriage	...	...	...	2
Cæsarean Section	...	...	...	5	Twins	...	...	...	3
Premature Births	...	...	...	1					

The number of attendanees made at the Ante-Natal Clinie and the number of women attending were both less than in 1930, but exceeded the corresponding figures for 1929.

The number of cases sent by midwives was less, and the number sent by doctors was greater than in 1930.

It is pleasing to record that during the year the number of women who attended on their own initiative exceeded that in 1930 by 24.

In previous reports I have urged the advisability of expectant mothers placing themselves under medical care throughout the ante-natal period. In this connection it should be definitely stated that although the majority of local midwives are competent to carry out routine ante-natal supervision, certain morbid conditions may pre-exist or arise in the expectant woman which are beyond the midwife's diagnostic powers. Such forerunners of disaster as early cardiac disease or phthisis, and obscure septic foci, depend for their detection upon a medical examination.

The wise midwife should, if only from selfish motives, avail herself of any means designed to protect her patient. Attendance of her patient for ante-natal examination, either at the hands of a private practitioner or of the Clinic Medical Officer, will in no way detract from the midwife's prestige. In fact, such attendances, by increasing the possibility of an uncomplicated labour, should enhance the professional reputation of the midwife concerned.

The benefits to be derived from ante-natal supervision warrant strong emphasis. Although such supervision is but one of many measures designed to reduce the number of tragedies associated with childbirth, 17% of maternal deaths are directly attributable either to omission or inadequacy of ante-natal care.

Unfortunately, many women, either as a result of ignorance, or, owing to the ill-timed advice of their senile female relatives, neglect this wise precaution, although ante-natal facilities are now within the reach of all.

### SUPERVISION OF MIDWIVES.

Supervision of midwives practising in the area is undertaken by the Lady Assistant Medical Officer, assisted by the Senior Health Visitor, both of whom pay periodical visits to the homes of the midwives. During the year 126 such visits were made, and in only one case was the home environment found to be unsatisfactory. Prompt steps were taken to remove the cause of complaint.

All the local midwives practice ante-natal care, and visit their patients periodically during the expectant period. An improvement has again been evident in the keeping of ante-natal records, although in some instances they have been found to be incomplete, inaccurate, or otherwise unsatisfactory.

The following notifications required under the rules of the Central Midwives' Board were received :—

Notifications of still birth	...	...	...	...	59
„ laying out dead body	...	...	...	...	1
„ death in practice	...	...	...	...	1
„ having advised artificial feeding	...	...	...	...	17

#### DOCTORS' ACCOUNTS UNDER SECTION 14 (1) OF THE MIDWIVES ACT, 1918.

One hundred and eighty-six accounts were received from Doctors, for services rendered to patients, to whom they had been called in an emergency by a qualified midwife.

This compares with 148 in 1930, and 99 in 1929. The total amount of the accounts was £236 17s. 0d. The Sub-Committee assessed the amounts recoverable from the patients at £131 7s. 6d., and £76 8s. 0d. was actually paid by patients during the year.

#### REASONS FOR SENDING FOR MEDICAL ASSISTANCE DURING 1931.

##### *Pregnancy :*

Albuminuria	...	...	...	...	9
Head not fixed...	...	...	...	...	3
Hyperemesis Gravidarum	...	...	...	...	1
Illness of patient	...	...	...	...	2
Œdema of hands and face	...	...	...	...	1
Œdema of legs and feet	...	...	...	...	1
Swelling behind knee	...	...	...	...	1
Vaginal discharge	...	...	...	...	1
				—	19

##### *Labour :*

##### *Malpresentations :*

Breech	...	...	...	...	...	11
Face	...	...	...	...	...	4
Footling...	...	...	...	...	...	2
Knee	...	...	...	...	...	1
Occipito posterior	...	...	...	...	...	9
Prolapse of cord	...	...	...	...	...	3
Shoulder	...	...	...	...	...	1
Malprosentations (not statod)	...	...	...	...	...	5
					—	36

##### *Obstructed Labour :*

Forceps difficult labour	...	...	1		
Impacted Head	...	...	4		
Obstructed labour	...	...	2	—	7



*Delayed Labour :*

Delayed labour...	...	...	...	57		
Prolonged labour	...	...	...	19		
Rigid Cervix	...	...	...	1		
Uterine inertia...	...	...	...	10	—	87

*Hæmorrhages :*

...	...	...	...	...	—	31
-----	-----	-----	-----	-----	---	----

*Other Causes :*

Adherent membranes and placenta	...	...	...	7		
Dropsy of patient in labour	...	...	...	1		
Eclampsia	...	...	...	2		
Laceration of vaginal wall	...	...	...	1		
Miscarriage	...	...	...	3		
Precipitate labour	...	...	...	2		
Retained membranes	...	...	...	5		
Torn perineum	...	...	...	194	—	215

*Puerperium :*

Mania	...	...	...	...	1	
Pain in leg	...	...	...	...	3	
Phlebitis	...	...	...	...	1	
Respiratory disease	...	...	...	...	1	
Rise of temperature and pulse	...	...	...	...	7	
Syncope...	...	...	...	...	1	— 14

*Baby :*

Anencephalic monster	...	...	...	1		
Asphyxia pallida	...	...	...	4		
Cephalhæmotoma	...	...	...	1		
Cephalhæmotoma and jaundice	...	...	...	1		
Chill	...	...	...	...	1	
Convulsions	...	...	...	...	2	
Cyanosis and distress	...	...	...	...	1	
Eye conditions	...	...	...	...	20	
Discharge from eyes	...	...	...	5		
Inflammation	...	...	...	3		
Sticky	...	...	...	9		
“ Watery ” eye	...	...	...	3		
Fœtal distress	...	...	...	...	6	
Hydrocephalus...	...	...	...	...	1	
Illness of child (not stated)	...	...	...	...	6	
Jaundice	...	...	...	...	2	
Phimosis	...	...	...	...	2	
Prematurity	...	...	...	...	6	
Pus spots	...	...	...	...	1	
Retention of urine	...	...	...	...	1	

Septic umbilicus	...	...	...	1			
Snuffles and hæmorrhage from umbilicus				1			
Spina bifida	...	...	...	2			
Stillbirth	...	...	...	5			
Vomiting	...	...	...	1	—	66	
TOTAL	...	...	...	...		476	

## SPRINGFIELD MUNICIPAL MATERNITY HOME.

Two hundred and forty-five cases were admitted during the year, being three more than in 1930.

Every effort is made to ensure that all cases booked for Springfield receive adequate ante-natal care and, unless a private practitioner is in attendance, the cases are seen regularly, either at Victoria Street or at Springfield.

(1)	Number of cases in the Home on 1st January, 1931	...	...	...	8		
(2)	Number of cases admitted during 1931	...	...	...	...	245	
(3)	Average duration of stay	...	...	...	...	14	days
(4)	No. of cases delivered by :—						
	(a) Midwives	...	...	...	...	189	
	(b) Doctors	...	...	...	...	44	
(5)	No. of cases in which medical assistance was sought by the midwife, with reasons for requiring assistance...	...	...	...	...	103	
	(a) <i>Ante Natal :</i>						
	Albuminuria...	...	...	...	4		
	Cardiac disease	...	...	...	2		
	Ante partum hæmorrhage	...	...	...	2		
	Contracted pelvis	...	...	...	2		
	Bronchitis	...	...	...	2	—	12
	(b) <i>During Labour :</i>						
	Uterine inertia	...	...	...	11		
	Prolonged labour (large child)	...	...	...	1		
	Rigid perineum	...	...	...	1		
	Malpresentation	...	...	...	7		
	Adherent placenta	...	...	...	2		
	Fœtal distress	...	...	...	3		
	Prolapsed cord	...	...	...	1		
	Post partum hæmorrhago	...	...	...	7	—	33
	(c) <i>After Labour</i>	...	...	...	...	49	

(d) *For Infant :*

Spina bifida ... ..	2	
Asphyxia ... ..	1	
Dangorous foebloeness ... ..	3	
Talipes ... ..	1	
Persistont vomiting... ..	1	
Imperforate Anus ... ..	1	— 9

## (6) No. of cases notified as :

(a) Puerperal fever ... .. Nil.

(b) *Puerperal Pyrexia :*

Influenza ... ..	2	
Chronic nephritis and Cystitis ...	1	
Adherent placenta and removal ...	1	— 4

(7) No. of cases of pemphigus neonatorum ... .. Nil.

(8) No. of cases notified as ophthalmia neonatorum, with result of treatment in each case ... .. 1  
 Eye quite clear on the 14th day.

(9) No. of cases of " inflammation of the eyes," however slight ... .. 5

(10) No. of infants not entirely breast fed while in the Institution, with reasons why they were not breast fed ... .. 2  
 Cardiac disease (Mother) ; Debility (Mother).

(11) No. of maternal deaths, with causes ... .. Nil.

(12) No. of foetal deaths (a) Stillborn, and (b) Within 10 days of birth and their causes—and the results of the post mortem examination, if obtainable :—

(a) Anencephalic ... ..	1	
Macerated foetus ... ..	2	
Prolapse cord and vertex ... ..	1	
Prematurity ... ..	2	
Extended breech ... ..	1	
Malpresentation ... ..	1	— 8
(b) Prematurity ... ..	1	

## PUERPERAL FEVER &amp; PUERPERAL PYREXIA.

(a) *Puerperal Fever :—*

Seven notifications were received during the year, one of which, in respect of an out-of-the-Borough case, was not investigated. Two cases, one an out-of-the-Borough case, terminated fatally.

Based on the total number of births registered in the Borough, the puerperal fever rate for 1931 is 3·2 per 1,000, compared with 4·3 and 5·3 for 1930 and 1929 respectively.

No. of cases notified	...	...	...	...	...	...	...	7
Borough cases	...	...	...	...	...	...	...	6
Out of Borough cases (died in Nursing Home)	...	...	...	...	...	...	...	1
No. of cases attended by midwife alone	...	...	...	...	...	...	...	1
No. of cases attended by a doctor and midwife	...	...	...	...	...	...	...	2
No. of cases attended in an Institution	...	...	...	...	...	...	...	3
No. of cases treated entirely at home	...	...	...	...	...	...	...	2
No. of cases treated in Hospital	...	...	...	...	...	...	...	5
No. of cases attended by a District Nurse...	...	...	...	...	...	...	...	3
<i>(One case was later transferred to Queen's Park Hospital).</i>								
No. of cases which recovered...	...	...	...	...	...	...	...	5

(b) *Puerperal Pyrexia* :—

Twenty-one cases, of which one terminated fatally, were notified during the year.

Five of the notifications, in respect of out-of-the-Borough patients, were not investigated.

No. of cases notified	...	...	...	...	...	...	...	21
Borough cases	...	...	...	...	...	...	...	16
Out of Borough cases	...	...	...	...	...	...	...	5
No. of cases attended by Doctor alone	...	...	...	...	...	...	...	1
No. of cases attended by Midwife alone	...	...	...	...	...	...	...	2
No. of cases attended by Doctor and Midwife	...	...	...	...	...	...	...	8
No. of cases attended in Institution...	...	...	...	...	...	...	...	10
No. of cases treated at Home	...	...	...	...	...	...	...	7
No. of cases treated in Hospital	...	...	...	...	...	...	...	14
No. of cases attended by District Nurse	...	...	...	...	...	...	...	9
No. of cases which recovered...	...	...	...	...	...	...	...	20
No. of cases which died	...	...	...	...	...	...	...	1

The pyrexia rate per 1,000 births for 1931 was 12·9, compared with 10·03 and 9·07 for 1930 and 1929 respectively.

Specialist opinion, in cases of puerperal fever and puerperal pyrexia is available on request to the Medical Officer of Health. Examination of pathological material in connection with these cases is carried out at the Public Health Laboratories in Manchester and Liverpool.

No difficulty has been experienced in securing immediate hospitalisation of cases of puerperal infection, as beds are available at the Royal Infirmary, the Corporation Hospital and the Queen's Park Hospital.

## MATERNAL MORTALITY.

During the year 13 deaths occurred in association with pregnancy, seven of which were in respect of out-of-Borough cases admitted to Blackburn Hospitals for the treatment of puerperal abnormality. If these latter cases be excluded the rate for Borough residents was 3·88 per 1,000 births, compared with one of 4·38 for 1930.

The gross maternal mortality rate for 1931 was 7·45. Although this figure is high the fact should not be overlooked that Blackburn is the Hospital Centre for an extensive area, which comprises both rural and industrial areas. It naturally follows that many cases of puerperal abnormality from surrounding areas find their way either into the Royal Infirmary or the Queen's Park Hospital for surgical or other treatment adopted as a last resource.

The appended Table classifies the causes leading to death of the six Borough cases :—

Retained placenta, post partum hæmorrhage	...	...	...	...	...	...	...	1
Mitral disease ..	...	...	...	...	...	...	...	1
Nephritis	...	...	...	...	...	...	...	1
Puerperal sepsis	...	...	...	...	...	...	...	1
Eclampsia	...	...	...	...	...	...	...	1
Surgical shock, difficult labour	...	...	...	...	...	...	...	1

All maternal deaths amongst Borough residents are investigated by the lady Assistant Medical Officer in co-operation with the private practitioner interested in the case.

Memorandum 156 M.C.W. was reported upon by the Medical Officer of Health and considered with great care by the Maternity and Child Welfare Committee.

Arising out of this Memorandum and the accompanying Report, the Committee decided that the local Maternity Service was adequate for the needs of the area. The service comprises an ante-natal and venereal disease treatment scheme, the provision of hospital beds for both normal, abnormal and infected cases, the provision of consultant and pathological services, and the supply of various ancillaries, such as milk and sterilised maternity outfits.

Although the Committee were of opinion that clinical refresher courses for midwives practising in the area are eminently desirable, local circumstances do not permit of such a scheme. The Committee has, however, during the past three years, partly met this need by arranging a series of lectures which are given by well-known obstetricians to local midwives. These lectures have been well attended and have aroused much interest. Midwives are also encouraged to attend the Ante-Natal Clinic with their patients, and thereby receive unostentatious instruction from the Medical Officer in charge.

The Committee decided that, although the Blackburn scheme could not be advantageously expanded, the appended minor extensions and amendments were worthy of trial :—

- (1) The fees of midwives in approved cases to be paid by the Corporation ;
- (2) Midwives to be paid 10s. compensation for cases which are removed to hospital, after being reported upon by a doctor and/or midwife, and approved by the Medical Officer of Health ;
- (3) A list of suitable persons to be compiled to act as home-helps.



TABLE 75.

## MATERNAL MORTALITY

RATES PER 1,000 BIRTHS REGISTERED.

YEAR	SEPSIS	OTHER CAUSES	TOTAL	YEAR	SEPSIS	OTHER CAUSES	TOTAL
1891	1.71	2.70	4.41	1912	1.09	3.28	4.37
1892	2.31	4.64	6.95	1913	1.02	4.46	5.48
1893	0.51	4.38	4.89	1914	2.14	4.28	6.42
1894	0.55	5.24	5.79	1915	1.22	2.03	3.25
1895	1.79	5.89	7.68	1916	1.93	1.93	3.86
1896	1.40	7.03	8.43	1917	0.61	5.53	6.14
1897	1.92	2.75	4.67	1918	1.29	5.80	7.09
1898	0.54	3.00	3.54	1919	2.72	3.28	6.00
1899	2.19	3.29	5.48	1920	1.06	4.59	5.65
1900	2.90	1.16	4.06	1921	2.37	1.97	4.34
1901	2.65	3.54	6.19	1922	0.45	6.43	6.88
1902	3.27	4.73	8.00	1923	2.39	4.29	6.68
1903	1.50	6.05	7.55	1924	1.51	3.53	5.04
1904	0.96	4.19	5.15	1925	2.10	3.68	5.78
1905	3.13	6.57	9.60	1926	4.01	4.01	8.02
1906	1.46	3.80	5.26	1927	1.76	5.87	7.63
1907	3.58	5.07	8.65	1928	0.58	3.46	4.04
1908	0.58	4.09	4.67	1929	1.93	7.72	9.65
1909	2.23	4.14	6.37	1930	0.00	4.38	4.38
1910	2.71	4.41	7.12	1931	0.64	3.24	3.88
1911	1.75	5.60	7.35				
Average	1891—	1900	..	..	1.58	4.00	5.59
	1901—	1910	..	..	2.20	4.65	6.85
	1911—	1920	..	..	1.48	4.07	5.56
	1921—	1930	..	..	1.71	4.53	6.24

## NOTIFICATION OF BIRTHS.

The Notification of Births Act, 1915, requires that all births be notified to the Medical Officer of Health within 36 hours of their occurrence.

Following the receipt of notification, a very large proportion of the births are visited.

All cases notified by midwives are visited as soon as possible after the birth, and cases attended by doctors are visited, where the home circumstances warrant it, as soon as possible after the doctor ceases attendance.

It is required that births be both registered and notified and although registration is invariably carried out, 88 parents neglected to notify during the year. In order that no births be overlooked, the notifications are checked by comparison with the returns of the Registrar of births, and a letter sent to the parents of any child whose birth has not been notified.

The existing arrangements for the visiting of children between the ages of one and five years are adequate.

The following Table illustrates the source of notifications during the year :—

	<i>Live Births</i>				<i>Still Births</i>				<i>Total</i>
Doctors ... ..	74	...	17	...	91				
Midwives ... ..	1408	...	67	...	1475				
Parents and others ...	199	...	11	...	210				
	—		—						
TOTALS ... ..	1681	...	95	...	1776				
	—		—						

### STILL BIRTHS.

The number of still births registered during the year was 95; 59 of these occurred in the practices of midwives.

### NEO-NATAL DEATHS.

During the year 43 infants died within two months of birth; eight of the deaths were ascribed to foetal states, 19 to prematurity, and the remaining 16 to post-natal causes.

The number of neo-natal deaths (*i.e.*, within the first four weeks of life) was 32, a figure equivalent to 1·8% of live births notified.

## PREMATURE BIRTHS.

All premature births are followed up, and of 40 premature infants born during 1931, 21, or 52% were alive at the end of the year.

*Causes of prematurity :*

Albuminuria...	...	...	...	...	...	...	2
Ante partum hæmorrhage	...	...	...	...	...	...	2
Heart disease due to rheumatic fever	...	...	...	...	...	...	1
Hyperæmesis gravidarum	...	...	...	...	...	...	1
Ill health of mother	...	...	...	...	...	...	6
Multiple pregnancy	...	...	...	...	...	...	3
Shock	...	...	...	...	...	...	1
Threatened abortion	...	...	...	...	...	...	1
Venereal disease	...	...	...	...	...	...	1
Not known	...	...	...	...	...	...	22

## INFANTILE MORTALITY.

During the year there were 94 deaths of infants, compared with 133 in 1930. This figure corresponds to an infantile mortality rate of 61·0 per 1,000 births registered, compared with 83·3, in 1930.

The infantile mortality rate for 1931 is the lowest yet recorded in Blackburn.

Of the deaths registered, 89 were of legitimate, and five of illegitimate children. The rate of infantile mortality amongst legitimate infants was 60·3 per 1,000 legitimate births registered, and amongst illegitimate children, 76·9 per 1,000 illegitimate births registered.

Of the deaths certified 32, or 34·04%, occurred within the first month of life.

The more important causes of death were as follows :—

<i>Cause.</i>	<i>Number of Deaths.</i>		<i>Percentage of Total Infantile Deaths.</i>
Premature Birth .....	21	..	22·3
Congenital defect .....	8	..	8·5
Pneumonia .....	21	..	22·3
Whooping Cough .....	8	..	8·5

St. Peter's Ward shows the highest rate of infantile mortality (100), followed by St. John's (81), and Trinity (76). St. Mark's exhibited the lowest rate (31).

Taking the Infantile Mortality over a period of ten years, St. Silas's shows by far the best figures, St. Stephen's comes next, followed by St. Andrew's. The worst wards during the same period were St. Mary's, St. Peter's and Trinity. In Table 76 it will be noted that, with the exception of St. Thomas' Ward, the density of population is lowest in those wards with the lowest infantile mortality rate.

TABLE 76

INFANTILE MORTALITY IN WARDS AND COMPARISON WITH  
DENSITY OF POPULATION.

WARD	Estimated Population mid- dle of 1930	Persons per Acre	Rooms per person	Births	Birth Rate	Infantile Mortality	Deaths	Death Rate	Natural Increase or Decrease of Popul'n 1930-31	Census Popula- tion 1926 (March)
	1	2	3	4	5	6	7	8	9	10
St. Stephen's ..	10694	9.2	1.08	191	17.8	62	183	71.1	—212	11212
Trinity .. ..	8673	58.0	1.05	105	12.1	76	121	13.9	—98	8696
St. Michael's ..	8784	14.1	1.10	86	9.7	34	107	12.1	—99	8787
St. John's .. ..	7037	69.2	1.13	86	12.2	81	85	12.0	—80	6957
St. Silas's .. ..	8821	8.9	1.50	75	8.5	40	132	14.9	100	9210
St. Paul's .. ..	9592	78.0	1.12	135	14.0	74	142	14.8	—68	9715
St. Peter's .. ..	6566	51.1	1.05	70	10.6	109	102	15.5	—74	6613
St. Mary's .. ..	5402	31.8	1.02	76	14.0	65	90	16.6	—61	5474
St. Matthew's ..	9129	83.2	1.05	111	12.1	72	132	13.3	—93	9200
St. Thomas' ..	11807	6.8	1.08	151	12.8	60	146	12.3	—134	11941
Park .. .. .	9280	14.3	1.08	106	11.4	38	120	12.9	—104	9467
St. Luke's .. ..	7396	44.2	1.03	106	14.3	56	108	14.6	—96	7641
St. Mark's .. ..	10250	25.5	1.13	97	9.4	31	129	12.5	—63	10311
St. Andrew's ..	10469	9.2	1.07	144	13.7	61	158	15.0	—118	11273
	123900	16.2	1.11	1539	12.4	61	1755	14.1	—1400	126497

COMPARISON OF BLACKBURN INFANTILE MORTALITY RATE WITH THAT OF  
ENGLAND AND WALES FROM 1922—1931.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Blackburn.....	98	100	84	97	89	77	80	80	83	61
England and Wales..	77	69	75	75	70	69	65	74	60	66

TABLE 77.

INFANTILE MORTALITY IN WARDS FROM 1922 TO 1931.

WARD.	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	Average for 10 y'rs
St. Stephen's ...	67	56	68	65	130	45	47	62	36	62	62.8
Trinity ...	129	163	60	101	62	153	118	96	80	76	103.8
St. Michael's ...	78	105	99	80	78	46	65	108	95	34	78.8
St. John's ...	76	75	101	61	66	52	108	99	109	81	82.8
St. Silas's ...	69	50	44	29	67	41	53	63	59	40	51.5
St. Paul's ...	133	130	76	107	83	59	73	110	56	74	90.1
St. Peter's ...	170	91	149	105	104	119	127	116	103	100	118.4
St. Mary's... ..	138	128	99	188	158	97	77	126	205	65	128.1
St. Matthew's ...	111	90	120	65	106	41	105	39	68	72	81.7
St. Thomas's ...	71	130	76	84	53	76	77	103	128	60	85.8
Park ... ..	69	110	86	118	75	80	81	58	50	38	76.5
St. Luke's... ..	116	74	90	118	92	147	111	44	60	56	90.8
St. Mark's... ..	106	85	60	122	99	61	51	71	96	31	78.2
St. Andrew's ...	72	81	73	110	75	68	60	56	71	61	72.7
Borough ... ..	98	100	84	97	89	77	80	80	83	61	84.9



TABLE 78.—DEATHS UNDER ONE YEAR, ARRANGED ACCORDING TO DAYS, WEEKS AND MONTHS.

CAUSES OF DEATH.		1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11	11 months to 12	TOTAL.
All Causes { Certified ... .. { Uncertified... ..		8 2	7 —	5 —	1 —	— —	— —	2 —	23 2	3 —	4 —	— —	30 2	11 —	7 —	1 —	6 1	4 —	8 —	5 —	6 —	5 —	3 —	5 —	91 3
{ Smallpox ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Chickenpox ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Measles ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
{ Scarlet Fever ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Whooping-cough ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	2	1	2	8
{ Diphtheria and Croup ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Erysipelas ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Tuberculous Meningitis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
{ Abdominal Tuberculosis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Other Tuberculous Diseases ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Meningitis (not Tuberculous) ... ..		—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
{ Convulsions ... ..		—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
{ Laryngitis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Bronchitis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Pneumonia (all forms) ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Diarrhoea ... ..		—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Enteritis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Gastritis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Syphilis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Rickets ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Suffocation, overlying ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Injury at birth ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Atelectasis ... ..		2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Congenital Malformations ... ..		1	—	2	—	—	—	1	4	1	2	—	7	—	—	—	—	—	—	—	—	—	—	—	—
{ Premature Birth ... ..		7	5	2	1	—	—	—	15	1	—	—	16	3	1	1	—	—	—	—	—	—	—	—	—
{ Atrophy, Debility and Marasmus ... ..		—	1	1	—	—	—	—	2	—	1	—	3	1	1	—	—	—	—	—	—	—	—	—	—
{ Other causes ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL ... ..		10	7	5	1	—	—	2	25	3	4	—	32	11	7	1	7	4	8	5	6	5	3	5	94

Nett Births registered during the calendar year ...	{ legitimate ... ..	1474	{ illegitimate ... ..	89
Nett Deaths registered during the calendar year of ...	{ legitimate infants ... ..	1474	{ illegitimate infants ... ..	89

TABLE 79.

## DEATH RATES UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	RATES PER 1,000 BIRTHS.												
	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Small-pox ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicken-pox ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Measles ... ..	0.0	3.5	1.1	2.7	0.9	0.5	4.2	0.5	3.5	0.0	0.0	3.7	0.6
Scarlet Fever ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Whooping-cough ... ..	0.5	0.0	3.5	1.8	2.3	2.0	2.1	3.4	0.0	1.1	1.2	1.2	5.2
Diphtheria and Croup ... ..	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.6	0.0
Erysipelas ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tuberculous Meningitis ... ..	1.0	1.0	0.0	0.4	0.4	0.5	0.0	0.5	0.0	0.0	0.6	0.0	0.6
Abdominal Tuberculosis ... ..	0.5	0.4	1.1	0.4	0.0	0.5	0.5	0.5	0.0	0.5	0.0	0.0	0.0
Other Tuberculous Diseases... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.6
Meningitis ( <i>not Tuberculous</i> )... ..	0.0	4.2	0.7	2.3	0.9	1.0	2.1	2.2	0.5	1.7	1.9	0.0	1.3
Convulsions ... ..	4.9	4.4	8.3	4.5	4.3	5.0	5.2	2.2	2.9	2.8	4.5	5.0	1.9
Laryngitis ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bronchitis ... ..	11.4	10.2	10.6	5.9	7.1	7.0	12.0	8.6	6.4	10.3	8.3	3.7	3.2
Pneumonia ( <i>all forms</i> ) ... ..	10.8	10.2	14.2	12.8	12.4	12.6	13.1	13.2	11.7	9.8	15.4	12.5	13.6
Diarrhœa ... ..	5.4	10.2	7.9	3.2	4.3	5.5	4.7	4.0	7.0	1.7	2.5	3.7	5.2
Enteritis ... ..	0.0	1.4	4.7	4.1	4.8	0.0	0.5	1.1	0.0	0.5	0.0	0.6	0.0
Gastritis ... ..	0.5	1.7	1.1	1.8	0.9	3.0	1.0	1.7	1.7	0.0	0.0	0.0	0.6
Syphilis ... ..	0.5	1.7	2.3	0.9	2.8	2.0	2.6	0.0	0.0	2.3	0.6	0.0	0.0
Rickets ... ..	1.0	0.0	1.5	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Suffocation, overlying ... ..	0.5	0.7	0.0	0.4	0.4	0.0	0.0	0.0	0.5	0.5	0.6	1.8	0.0
Injury at Birth ... ..	0.5	1.4	0.3	1.3	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Atelectasis ... ..	1.6	1.7	2.7	0.4	0.9	0.5	0.5	0.0	2.3	0.0	0.6	1.2	1.3
Congenital Malformations ... ..	2.7	4.2	3.9	4.5	10.5	3.5	5.7	5.7	3.5	0.5	2.5	10.6	5.2
Premature Birth ... ..	26.6	23.7	22.5	25.7	25.3	15.6	20.5	23.5	14.7	16.1	20.6	22.5	13.6
Atrophy, Debility and Marasmus ... ..	16.3	18.0	14.2	14.2	10.9	10.6	8.6	14.3	17.0	21.9	13.5	11.2	3.2
Other causes ... ..	9.2	9.9	7.1	9.6	9.5	14.1	13.6	6.3	4.7	8.6	6.4	4.3	4.5

## OPHTHALMIA NEONATORUM.

Seven cases were notified during the year all of which were Borough cases. A bed is now available at the Corporation Hospital for the treatment of ophthalmia when treatment cannot be carried out satisfactorily at home.

**TABLE 80.****RESULTS OF TREATMENT.**

Cases Treated.			Vision Unimpaired	Vision Impaired	Total Blindness	Deaths.
Notified	At Home.	In Hospital				
7	3	4	7	—	—	—

All cases made a good recovery. The three cases treated at home were attended by a District Nurse.

**MATERNITY AND CHILD WELFARE CENTRES.**

There are six Maternity and Child Welfare Centres in the Borough, situated at Princes Street, Nova Scotia, Kendal Street, Griffin Parochial Hall, Cornelian Street and Hozier Street. Two sessions have been held each week at Hozier Street and Kendal Street.

In the following Table it will be noted that the attendances numbered 27,804, the highest number as yet recorded in Blackburn.

The average attendance per session at all Centres shows an increase over last year.

TABLE 81.

	Princes Street.	Hozier Street (2 sessions weekly).	Bolton Road	Kendal Street (2 sessions weekly).	Griffin.	Cornelian Street	Total, 1931.	Total, 1930.	Total, 1929.
Infants :—									
New cases under 1 year	101	255	137	204	129	84	910	...	..
No. of re-attendances..	1633	3141	1408	2786	1499	1219	11686	..	..
New cases over 1 year..	13	24	29	39	23	7	135	..	..
No. of re-attendances.	1623	4574	2357	2707	1784	1250	14295	..	..
Attendances of Infants	3370	7994	3931	5736	3435	2560	27026	..	..
Consultations with Dr.	332	1167	594	1114	591	399	4147	..	..
Expectant Mothers—									
No. of new cases ..	18	52	27	18	9	9	133	..	..
No. of re-attendances	119	208	131	112	17	58	645	..	..
Total Attendances of Expectant Mothers..	137	260	158	130	26	67	778	..	..
Total Attendances.. ..	3507	8254	4089	5866	3461	2627	27804	..	..
Average Attendance per session 1931 .. ..	76	82	70	61	70	53	*563	..	..
1930 .. ..	70	78	69	63	68	46	..	*535	..
1929 .. ..	65	70	69	94	61	40	..	..	*483

\* Total average attendance *each week* at all the Centres.

A doctor attends at each session, together with two Health Visitors, and assistance is given by three or four voluntary workers. To these ladies I wish to express my thanks for the enthusiastic manner in which they have performed their self-imposed duties.

Of the 1,539 live births notified during the year, 910, or 59·1%, attended the Infant Consultation Centres.

The percentages seen by a Doctor at each session per Clinic are as under :—

Princes' Street .. ..	10·0
Hozier Street .. ..	14·5
Nova Scotia .. ..	15·0
Kendal Street .. ..	19·4
Griffin .. ..	17·2
Cornolian Street .. ..	15·5

The talks by Health Visitors at the Clinics have been continued. The syllabus is as under :—

I. Expectant Motherhood. II Care of the New-Born Infant. III The Diet of a Nursing Mother. IV Breast Feeding. V Artificial Feeding. VI Weaning. VII The Hygiene of Infancy. VIII Baby Clothes. IX The Development of the Child. X Feeding from 1-5 Years. XI Rickets. XII Common Ailments of Infancy.

The appended Table shows the deaths of babies who attended the Clinics during their first year, as compared with the deaths of those who never attended the Clinics.

TABLE 82.

Area	Deaths	Attend'd a Clinic		Attendance at Birth			FullTime Baby		Births during same period.	Deaths in Institutions				
		Yes	No	Doctor	Mid- wife	Doctor & Mid- wife	Yes	No		Q'ens Park	Royal Infir- mary	Spring field	Reg. Mat.	Home
District I.	23	5	18	3	16	4	17	6	288	3	3	..	..	
„ II.	13	4	9	2	4	7	9	4	231	1	..	..	..	
„ III.	14	2	12	4	1	9	9	5	288	1	..	..	..	
„ IV.	12	4	8	1	5	6	11	1	118	2	..	..	..	
„ V.	13	3	10	3	5	5	12	1	133	3	2	..	..	
„ VI.	16	4	12	4	6	6	15	1	200	3	1	..	..	
„ VII.	3	1	2	1	1	1	1	2	281	1	..	..	..	
	94	23	71	18	38	38	74	20	1539	14	6	..	..	

## DENTAL TREATMENT OF MATERNITY AND CHILD WELFARE CASES.

Mr. H. Yates, the Senior Dental Surgeon, carried out the following work in connection with Maternity and Child Welfare Cases :—

	1930	1931
Number of Sessions held .. .. .	58	61
Number of Patients : Mothers .. .. .	121	96
Children .. .. .	348	344
Permanent Teeth Extracted .. .. .	184	187
Permanent Teeth Filled .. .. .	62	49
Temporary Teeth Extracted .. .. .	580	544
Temporary Teeth Filled .. .. .	28	11
Other Operations .. .. .	62	74



**TABLE 83.**  
**THE WORK OF THE HEALTH VISITORS.**  
**HOME VISITING.**

	<i>District</i> I.	<i>District</i> II.	<i>District</i> III.	<i>District</i> IV.	<i>District</i> V.	<i>District</i> VI.	<i>District</i> VII.	<i>Totals</i>
Visits to Expectant Mothers—								
First Visits .. ..	47	16	40	33	6	28	66	236
Re-visits.. ..	89	16	17	58	8	17	78	283
Ineffective Visits ..	4	2	4	2	2	2	1	17
Infants under 1 year—								
First Visits .. ..	329	259	235	125	61	216	273	1498
Re-visits.. ..	502	710	507	414	139	660	470	3492
Ineffective Visits ..	27	26	150	90	59	55	88	505
Infants aged 1 year—								
Re-visits.. ..	517	387	620	452	151	494	361	2982
Special Visits.. ..	4	3	1	...	...	...	...	8
Ineffective Visits ..	46	26	96	12	38	30	68	316
Children 2—5 years ..	958	766	1173	627	411	1168	755	5858
Ineffective .. ..	150	33	239	3	172	71	205	873
Ophthalmia								
Neonatorum—								
First Visits .. ..	1	...	...	...	1	6	...	8
Re-visits.. ..	4	...	...	...	1	5	...	10
Diarrhoea—								
First Visits .. ..	...	...	...	...	...	...	...	...
Re-visits.. ..	...	...	...	...	...	...	...	...
Stillbirths .. ..	13	17	30	5	2	20	15	102
Doctors' Accounts ..	50	47	41	16	8	17	30	209
Milk (Mothers and Children Order)—								
Visits .. ..	...	1	...	...	...	1	...	2
Midwives—								
Routine .. ..	100	...	...	...	...	...	...	100
Special .. ..	5	...	...	...	...	...	...	5
Ineffective .. ..	35	...	...	...	...	...	...	35
Puerperal Fever Visits	4	8	1	1	...	1	2	17
Houses where deaths of infants occurred	25	1	10	3	1	1	3	44
Miscellaneous Visits..	7	12	15	2	2	6	3	47
<b>TOTALS .. 1931 ..</b>	<b>2917</b>	<b>2340</b>	<b>3179</b>	<b>1843</b>	<b>1062</b>	<b>2798</b>	<b>2418</b>	<b>16557</b>
<b>1930 ..</b>	<b>3513</b>	<b>3165</b>	<b>3419</b>	<b>2183</b>	<b>1977</b>	<b>3494</b>	<b>3079</b>	<b>20830</b>

The above Table shows that the number of Home Visits paid during the year was considerably less than during 1930. The decline has been brought



about by staff absenteeism due to sickness, together with resignations and increased Clinic demands.

It will be noted in Table 84 that the number of Clinic Sessions attended by Health Visitors during 1931 was 1292, an increase of 101 over the corresponding figure for 1930.

**TABLE 84.**

**CLINIC SESSIONS ATTENDED.**

	<i>District</i> I.	<i>District</i> II.	<i>District</i> III.	<i>District</i> IV.	<i>District</i> V.	<i>District</i> VI.	<i>District</i> VII.	<i>Totals.</i>
Maternity and Child Welfare Clinics ..	101	141	134	108	56	97	128	765
Ante-Natal Clinics ..	23	15	19	95	4	14	18	188
Special V.D. Clinics ..	...	14	...	46	4	13	13	90
Other Clinics .. ..	45	35	45	33	20	33	38	249
<b>TOTALS ..</b>	<b>169</b>	<b>205</b>	<b>198</b>	<b>282</b>	<b>84</b>	<b>157</b>	<b>197</b>	<b>1292</b>
Total Houses visited ..	2374	1924	2638	1436	929	2265	2003	13569
Total Persons visited. .	2815	2317	3196	1843	1048	2630	2434	16283

## MATERNITY AND CHILD WELFARE ACT, 1918.

The following Table gives the number of families to whom assistance was rendered during 1931 under the Milk (Mothers and Children) Order.

TABLE 85.

Price.	No. on Jan. 1st, 1931.	New Cases during Year.	Cases Discontinued.	No. on Dec. 31st, 1931.
Free . . . . .	147	297	184	260
Quarter Price . .	16	61	58	19
Half-Price . . . .	7	43	40	10
<b>TOTAL . . . .</b>	<b>170</b>	<b>401</b>	<b>282</b>	<b>289</b>

For former years the corresponding figures (totals) are :—

1924 . . . . .	*164	494	528	†130
1925 . . . . .	*130	242	255	†117
1926 . . . . .	*117	316	238	†195
1927 . . . . .	*195	367	323	†239
1928 . . . . .	*239	363	482	†120
1929 . . . . .	*120	264	271	†113
1930 . . . . .	*113	322	265	†170

\* Beginning of Year.      † End of Year.

During the year 21,331 pounds of dried milk have been supplied to expectant and nursing mothers and young children at a cost to the Local Authority of £1,290/7/4½. In 1930, 15,941 pounds were supplied at a cost of £838/18/3. The nett cost in 1931, therefore, rose by £451/9/1½.

## CARE OF ILLEGITIMATE CHILDREN.

No special provision is made by the Corporation for the care of illegitimate children or unmarried mothers ; this work is undertaken at Viewfield Hostel by the Manchester Diocesan Association for Preventive and Rescue Work. The Health Department maintains a close co-operation with the authorities of the Hostel, and takes an active interest in the important work carried out there.

I am indebted to Miss Duckworth for the appended particulars respecting Viewfield:—

	<i>Mothers.</i>	<i>Babies.</i>	<i>Boarders</i>
Number of Beds .. .. .	16	16	
Number of Cases Admitted, 1931.. ..	14	12	One pregnant mother.
Number in Hostel, Jan. 1st, 1932.. ..	7	5	One mother whose baby had died.
Number returned to relatives and friends ..	4	4	..
Number of Mothers sent to situations ..	5	Their babies being placed with	
Babies kept as boarders.. .. .	..	1	foster mothers.
Babies taken back as boarders .. .. .	..	..	..
Baby boarders discharged .. .. .	..	1	Placed with foster mother

At the end of the year there were five babies under one year. Of these two were on four-hourly breast feeds.

### NURSING HOMES REGISTRATION ACT, 1927.

On receipt of application for registration under the above Act the premises are visited by either the Medical Officer of Health or by the Lady Assistant Medical Officer. On the occasion of this visit a survey is made of the available accommodation, advice given as to structural or other alterations required, and the number of beds to be used for the reception of cases is decided upon.

Following registration the Homes are visited quarterly by Dr. Baird, and at frequent intervals by the Senior Health Visitor. All have been found satisfactory.

The appended Table gives particulars of applications for registration in 1931:—

	<i>Nursing Homes.</i>	<i>Maternity Homes.</i>
Number of Applications .. .. .	0	4
Number of Houses Registered .. ..	0	4
Number of Orders made refusing or Cancelling Registration .. ..	0	0
Number of Appeals against such Orders..	0	0
Number of Applications for Exemption from Registration .. .. .	0	0
Number of cases in which Exemption has been—		
(a) Granted .. .. .	0	0
(b) Withdrawn .. .. .	0	0
(c) Refused.. .. .	0	0

*(a) Maternity Homes :*

At the beginning of the year there were ten private maternity homes in Blackburn. During the year no further homes were registered and one home was discontinued.

At the end of the year 22 lying-in beds and nine labour beds were available in private maternity homes.

*(b) Nursing Homes :*

At the end of the year there were three registered Nursing Homes in Blackburn, with a total of 25 beds for the reception of the sick.

### THE PRE-SCHOOL CHILD.

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#### CAUSES OF DEATH IN CHILDREN FROM ONE TO FIVE YEARS OF AGE

					1931		1930
Pneumonia and Bronchitis	...	...	...	...	14	...	19
Infectious Diseases (Non-Tubercular)			..	...	9	...	22
Tuberculosis (all forms)	...	...	...	...	2	...	3
Digestive System Diseases	...	...	...	..	3	...	4
All other causes	...	...	...	...	24	...	14
					—		—
			TOTALS	...	52	...	62
					—		—

There are now 17 Nursery Classes in Blackburn, with accommodation for 600 children under the age of five years. The work carried out at these classes has been fully described in the School Medical Report.

Many of the children in attendance at these Schools have been under supervision at the Child Welfare Centres. In order to secure continuity of observation the Assistant Medical Officer for Maternity and Child Welfare, who is also Assistant School Medical Officer, undertakes the School Medical Inspection of Nursery Class children.

## CHILDREN'S ACT, 1908.

The appended Table gives particulars of infants nursed out for reward within the Borough :—

(a) Number of Nursed Out Children Transferred from				
Guardians on April 1st, 1930	..	..	..	10
(b) Number of New Cases during 1931	..	..	..	8
(c) Number who Left the Borough during 1931	..	..		6
(d) Number at present in the Borough	..	..	.	15
(e) Number found to be :—				
(i) Satisfactory ..	..	..	..	18
(ii) Unsatisfactory	..	..	..	0

During the year six children were transferred to Institutions, three to Viewfield Hostel, three to Nazareth House ; one child was transferred to relatives at Blackpool ; one child passed out of observation on attaining the age of seven years. Inspection duties were undertaken by the Health Visiting Staff, who visit each case at least once in every six weeks. All the children have been found to be well cared for.

TABLE 86.

FEEDING OF INFANTS UP TO SIX MONTHS OF AGE—PERIOD FROM JULY 1ST, 1930, TO JUNE 30TH, 1931.

Condition at end of 6 months	Percentage of 142 children investigated	Breast entirely.	BREAST FEEDING ALONE UP TO END OF						BREAST FEEDING JOINTLY WITH ARTIFICIAL UP TO END OF						Artificial fed entirely.	Not Fed.
			3 weeks	1st m'nth	2nd m'nth	3rd m'nth	4th m'nth	5th m'nth	1st m'nth	2nd m'nth	3rd m'nth	4th m'nth	5th m'nth	6th m'nth		
Satisfactory ... ..	83.9	42.9	1.4	5.2	7.3	7.9	4.0	6.1	0.24	10.7	0.49	0.33	0.57	10.7	12.8	0.0
Fairly Satisfactory.	7.04	25.7	2.9	12.8	7.9	4.9	4.9	1.5	0.99	0.0	0.99	0.99	0.0	0.99	20.7	0.0
Unsatisfactory ...	5.3	31.1	1.2	5.1	11.6	2.5	5.1	1.2	1.2	1.2	0.0	0.0	0.0	10.3	28.5	0.0
Dead ... ..	3.7	3.7	7.4	3.7	5.5	1.8	5.5	3.7	1.8	1.5	0.0	0.0	0.0	0.0	40.7	25.8



*PART VIII.*

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Miscellaneous.

TABLE 87.  
ULTRA-VIOLET LIGHT CLINIC.

Diagnosis.	No. of Cases Treated.			No. of Cases Discharged.			No. of cases att'ding at end of year.		Total number of exposures given to all cases attending.	
	Total	Male	Female	Cured	Improved	No Change.	M.	F.	Carbon Arc	Merc. Vap.
Debility .....	167	92	75	16	43	18	53	30	4116	653
Rickets .....	101	60	41	8	27	11	29	20	2415	135
Anæmia .....	101	38	63	21	32	13	14	15	2359	294
Lung Conditions (Non-Tubercular) .....	42	21	21	8	4	3	14	11	1177	64
Tubercular Conditions .....	116	63	53	13	41	25	15	17	1173	4092
Skin Diseases .....	80	42	38	54	8	10	4	4	394	1734
Malnutrition .....	34	15	19	2	12	5	5	10	479	188
Post Infectious Cases .....	20	9	11	17	1	..	1	..	5	428
Other Conditions .....	42	21	21	3	11	9	8	8	568	600
TOTAL .....	703	361	342	142	179	94	143	115	12686	8188
Total Health Dept. Clinic.	528	263	265	97	150	77	165	99	8369	5006
Total Corporation Hospital Clinic .....	177	98	77	45	29	17	38	16	4317	3182
GRAND TOTAL .....	703	361	342	142	179	94	143	115	12686	8188

Table 87 is a composite Table which contains particulars of cases treated at both the Health Department and Hospital Clinics.

### BACTERIOLOGICAL AND PATHOLOGICAL EXAMINATIONS.

Facilities are available for the examination of pathological and bacteriological specimens at the Corporation Hospital, at the Royal Infirmary, and at the Public Health Laboratories at Manchester and Liverpool.

The appended Table gives particulars of examinations carried out during 1931.

For particulars of work carried out at the Corporation Hospital Laboratory see Table 57.

**TABLE 88.**

<i>Nature of Test.</i>	<i>Royal Infirmary.</i>		<i>Liverpool University.</i>		<i>Manchester University.</i>		<i>Total.</i>
	<i>Pos.</i>	<i>Neg.</i>	<i>Pos.</i>	<i>Neg.</i>	<i>Pos.</i>	<i>Neg.</i>	
For Typhoid—Widal Test . .	—	—	—	—	—	8	8
For Gonococci—							
For Private Practitioners .	—	—	—	—	9	36	45
For V.D. Clinic (B.R.I.) .	202	714	—	—	—	—	916
For Spirochetes . . . . .	—	1	—	—	—	1	2
Wassermann Test—							
For Private Practitioners .	—	—	—	—	32	61	93
For V.D. Clinics . . . . .	—	—	—	—	146	467	613
	202	715	—	—	187	573	1677

Four samples of fæces and urine for typhoid, and one specimen of urine for T.B. were also submitted to the Public Health Laboratories, Manchester.

### LOCAL GOVERNMENT ACT, 1929.

No alterations or developments, other than those described in Part I. of this Report under the Heading of “Hospital Accommodation,” have taken place during the year.

The work of both Public Assistance and Health Committees is now closely co-ordinated.

## MENTAL DEFECTIVES.

The Local Authority does not provide institutional accommodation for mental defectives, nor has there been any change in the arrangements in force during 1931.

## NURSING IN THE HOME.

Domiciliary nursing of cases of Measles, Whooping Cough, Diarrhœa, Puerperal Fever, Ophthalmia Neonatorum, Influenzal Pneumonia, and Tuberculosis is undertaken by the District Nursing Association.

The Corporation pay the Association an annual retaining fee of £35 for these services, with an additional payment of 8d. per visit.

The appended Table gives particulars of the work carried out by the District Nursing Association in this respect during 1931 :—

TABLE 89.

## HOME NURSING BY DISTRICT NURSES.

Disease	On books Jan. 1st 1931	New Cases	Cured	Died	Hospital	Remain- ing end of 1931	Visits
Tuberculosis .. ..	5	22	7	9	5	6	1662
Pneumonia .. .. .	10	165	121	35	8	11	2768
Puerperal Fever and Pyrexia .. .. .	..	15	11	..	4	..	276
Ophthalmia Neonatorum .. ..	..	10	8	..	2	..	252
Diarrhœa .. .. .	..	1	..	1	..	..	6
TOTAL .. .. .	15	213	147	45	19	17	4964

## HEALTH EDUCATION.

During the year (exclusive of Health Week) 26 lectures were given to audiences totalling 2,664. Particulars of these lectures are as under :—

<i>Date.</i>	<i>Lecturer.</i>	<i>Where Held and Title of Lecture.</i>
Jan. 9 ...	Dr. V. T. Thierens ...	Viowfield Committee : " Infectious Diseases."
„ 13 ...	Dr. V. T. Thierens ...	Chapel Street Congregational Church Girls' Guild : " The Work of a Public Health Department."
„ 19 ...	Dr. V. T. Thierens ...	Blackburn Conservativo Association (Women) : " Personal Responsibility for Health."
„ 20 ...	Dr. Norman B. Capon.	Local Midwives : " Defects and Diseases of the New Born."
Feb. 12 ...	Dr. McLachlan ...	Audley Rango Y.P.F. : " Diet in rolation to Physical Fitness."
„ 17 ...	Prof. J. Johnstono Jervis ...	Local Midwives : " The Midwife's Duty to her Patient."
„ 25 ...	Dr. V. T. Thierens ...	Rotary Club : " Causation and Prevention of Infectious Disease."
Mar. 11 ...	Dr. J. St. George Wilson ...	Local Midwives : " Causes and Management of Delayed Labour."
„ 23 ...	Dr. V. T. Thierens ...	Furthergate Congregational Church Institute : " The Social Aspect of Venereal Disease."
„ 26 ...	Dr. V. T. Thierens ...	Blackburn Branch of the British Undertakers' Association : " Cremation."
May 5 ...	Dr. Hunter ...	Audley Range Instruction Centre (Girls') : " Diph- theria Provention."
Oct. 22 ...	Dr. V. T. Thierens ...	Four Lanes End Y.P.F. : " Personal Responsi- bility for the Maintenance of Health."
Nov. 2 ...	Dr. V. T. Thierens ...	Furthergate Church Men's Instituto : " Venereal Diseases."
„ 16 ...	Dr. V. T. Thierens ...	Women's Co-operative Guild, Brownhill : " Diph- theria Prevention."
„ 23 ...	Dr. V. T. Thierens ...	Furthergate Congregational Church Girls' Guild : " Clean Milk."
Dec. 1 ...	Dr. V. T. Thierens ...	Men and Women's Co-operative Guild : " Welfare of tho Infant and School Child."
„ 6 ...	Dr. V. T. Thierens ...	Queen's Hall : " Tho Social Aspects of Venereal Disease."

<i>Date.</i>	<i>Lecturer.</i>	<i>Where held and Title of Lecture.</i>
July 8 ...	Dr. McLachlan ... ..	Bank Top C. Infants' School.
„ 14 ...	Dr. McLachlan ... ..	Holy Trinity Senior School.
Dec. 3 ...	Dr. Gorman ... ..	Wensley Fold School.
„ 16 ...	Dr. McLachlan ... ..	Cedar Street Infants' School.
„ 17 ...	Dr. Gorman ... ..	Witton C.E. Infants' School.
„ 17 ...	Dr. McLachlan ... ..	St. Aidan's Infants' School.
„ 18 ...	Dr. McLachlan ... ..	Moss Street Junior and Infants' School.
„ 23 ...	Dr. Baird ... ..	Mill Hill C. Senior School.
„ 23 ...	Dr. Gorman ... ..	Bank Top C. School.

A Health Week and Exhibition were held in April, the latter being visited by approximately 63,000 people.

As part of the programme film lectures were given in a hall adjoining the Exhibition, which were attended by audiences totalling approximately 9,700.

In addition lectures were given at Places of Worship, political and social clubs, etc., to 5,546 people.



## PREVENTION OF BLINDNESS.

### PUBLIC HEALTH ACT, 1925, SEC. 66.

Beds are provided at the Corporation Hospital for the reception of selected cases of ophthalmia neonatorum; the District Nursing Association, under agreement with the Corporation, undertakes the domiciliary nursing of ophthalmia neonatorum, and during the year nursed 18 cases, to which 252 visits were paid.

A special school, at Roe Lee, for the care of children suffering from severe visual defect provides accommodation for 20 children.

## WELFARE OF THE BLIND.

### THE BLIND PERSONS ACT, 1920, SEC. 2, SUB-SECTION 1.

The Local Authority has made provision for the welfare of the blind through two voluntary agencies, the Blackburn Workshops for the Blind and the Blackburn and Darwen Home Visiting Society.

In 1931 the Blind Persons Scheme cost the Corporation £4,100, allotted as under :—

Workshops for the Blind	...	...	...	...	£1,251.
Visiting Society	...	...	...	...	£408.
Other Blind Agencies	...	...	...	...	£256.
Grants to unemployable necessitous persons	...				£2,165.
Sundry expenses	...	...	...	...	£20.

In addition to the above grants the Workshops received £468 and the Visiting Society £117 from the Joint Finance Committee for the Blind. This Committee is composed of representatives from the Local Authorities whose districts are served by the Workshops and Visiting Society. Its function is to organise and co-ordinate the raising of voluntary funds for the Blind.

The Blind Register contains particulars of 275 blind persons resident in Blackburn.

TABLE 90.

Corporation Hospital Station, Height 560 feet.

## METEOROLOGY, 1931.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.
Amount of Bright Sunshine..	28 0	24 40	112 45	79 25	177 0	115 35	100 5	138 35	97 20	102 25	24 30	13 45	1012 50
Average per day .....	0 54	0 53	3 38	2 39	5 42	3 51	3 14	4 28	3 14	3 18	0 49	0 26	..
Maximum amount in one day.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	..
	4 35	5 0	10 0	10 15	13 30	14 0	11 0	13 30	12 0	8 20	6 0	5 0	..
Total Rainfall (in inches)....	4.42	4.74	0.89	3.17	2.45	4.90	3.665	5.23	3.72	2.83	6.51	1.70	44.225
No. of days on which rain fell.	25	22	5	21	19	18	26	18	18	14	25	17	228
Av. Temp. at 9 a.m. (Fahr.)..	36.5	36.5	34.8	42.4	49.7	52.6	55.1	52.8	48.5	44.1	44.0	40.5	—
Temp. of earth at depth of 1 ft.	37.8	37.2	37.2	43.3	49.0	55.1	58.5	57.1	53.4	48.9	45.0	41.7	—
Temp. of earth at depth of 4 ft.	41.4	40.0	39.1	41.4	46.0	50.0	54.1	55.8	53.6	52.0	47.3	44.4	—
Highest Temp. in Shade .....	46.0	49.0	63.0	62.0	71.0	70.0	69.0	70.0	68.0	62.0	58.0	54.0	—
Lowest Temp. in Shade .....	23.0	25.0	20.0	27.0	32.5	37.0	46.0	42.0	34.0	23.0	33.0	27.0	—
Av. Temp. Sun (black bulb)...	33.8	38.6	45.1	63.7	98.0	74.0	82.0	86.5	73.7	47.4	39.5	38.3	—
Lowest Temp. on Grass .....	20.0	20.0	17.0	27.0	30.0	33.0	43.0	37.0	30.0	19.0	32.0	23.0	—
Highest cor. reading of barom.	30.443	30.210	30.442	30.135	30.179	30.263	29.993	30.221	30.557	30.513	30.236	30.577	—
Lowest cor. reading of barom.	28.965	29.154	29.415	29.110	29.454	29.455	29.406	29.149	29.220	29.403	28.581	29.251	—
Mean reading of barometer.. (uncorrected)	29.822	29.181	29.324	29.275	29.291	29.351	29.151	29.279	29.519	29.669	29.087	29.579	—

## LOCAL POWERS RELATING TO PUBLIC HEALTH.

### 1.—BLACKBURN CORPORATION ACTS AND ORDERS :—

The Blackburn Improvement Act, 1882.  
 The Blackburn Water Act, 1885.  
 The Blackburn Corporation Act, 1892.  
 Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1894.  
 Local Government Board's Provisional Orders Confirmation (No. 18) Act, 1897.  
 The Blackburn Corporation Act, 1901.  
 The Blackburn Corporation Act, 1908.  
 Local Government Board's Provisional Orders Confirmation (No. 9) Act, 1910.  
 The Blackburn Corporation Water Act, 1911.  
 Local Government Board's Provisional Orders Confirmation (No. 1) Act, 1919.  
 The Blackburn Corporation Act, 1922.  
 The Blackburn Corporation Act, 1929.

### 2.—ACTS OF PARLIAMENT ADOPTED BY THE COUNCIL :—

Parts II. & III. of the Public Health Acts (Amendment) Act, 1890, adopted by the Town Council, 2nd April, 1891.  
 INFECTIOUS DISEASES (PREVENTION) ACT, 1890, adopted by the Town Council (except Sections 14 and 19), 5th March, 1891.  
 Part III. of the Housing of the Working Classes Act, 1890, adopted by the Town Council, 5th August, 1897.  
 Public Health Acts Amendment Act, 1907 : Certain sections adopted by Orders of the Local Government Board on the 5th December, 1908 ; 5th January, 1910 ; and by Order of the Secretary of State, dated 27th October, 1909.

### 3.—BYE-LAWS AND REGULATIONS IN FORCE IN THE BOROUGH :—

General Bye-Laws, dated 12th January, 1855.  
 Bye-Laws for Regulation of Private Slaughterhouses, 25th October, 1877.  
 Regulations for Preventing Waste, Misuse, or Contamination of Water, 17th December, 1887.  
 Bye-Laws *re* Common Lodging Houses, 6th September, 1888.  
 Bye-Laws made under the Contagious Diseases (Animals) Act, 1878 to 1890, and the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1886, 5th July, 1893.  
 Bye-Laws *re* Houses Let in Lodgings, 4th April, 1895.  
 Bye-Laws for Regulation of Offensive Trades, 4th March, 1897.  
 Bye-Laws with Respect to Management and Charges for Slaughterhouses Established by the Council, 20th March, 1901.  
 Bye-Laws for the Prevention of Carrying Carcases through the Streets, 25th April, 1901.  
 Bye-Laws *re* Cattle Markets, 1st June, 1905.  
 Regulations made under the Diseases of Animals Acts, 1894 to 1903 and Lancashire (Parasite Mange) Order, of 1908, 9th February, 1910.  
 Regulations made under the Diseases of Animals Acts and Glanders or Farcy Order of 1920, 17th February, 1921.  
 County Borough of Blackburn Offensive Trades Confirmation Order, 1922, declaring Rag and Bone Doaling to be an Offensive Trade.  
 Bye-Laws *re* Tents, Vans, Sheds and Similar Structures, 15th May, 1924.  
 Bye-Laws *re* Houses Let in Lodgings, 20th June, 1924.

# MINISTRY OF HEALTH ORDERS, ETC., 1931.

## STATUTES :—

31/7/31 ... Agricultural Produce (Grading and Marking) Amendment Act, 1931.

## REGULATIONS :—

No. 150	...	10/3/31	...	The Census General Regulations, 1931.
No. 133	...	24/2/31	...	Factory and Workshops—The Shipbuilding Regulations, 1931.
No. 168	...	23/3/31	...	The Agricultural Produce (Grading and Marking) (Cider) Regulations, 1931.
No. 442	...	28/5/31	...	Ditto (Canned Vegetables) Reg. 1931.
No. 458	...	27/5/31	...	Ditto (Canned Fruits) Regs. 1931.
No. 455	...	1/6/31	...	Factory and Workshops—Dangerous and Unhealthy Industries Reg. 1931.
No. 444	...	29/5/31	...	Canal Boats (Amendment) Regulations. 1931.
No. 522	...	9/8/31	...	The Sweets (Manufacture) Regulations. 1931.
No. 632	...	20/7/31	...	The Agricultural Produce (Grading and Marking) (Beef) Regulations. 1931.

## ORDERS :—

No. 106	...	12/2/31	...	The Merchandise Marks (Imported Goods)	No. 1 Order. 1931.
No. 107	...	12/2/31	...	Ditto	No. 2 Order. 1931.
No. 108	...	12/2/31	...	Ditto	No. 3 Order. 1931.
No. 109	...	12/2/31	...	Ditto	No. 4 Order. 1931.
No. 110	...	12/2/31	...	Ditto	No. 5 Order. 1931.
No. 127	...	5/3/31	...	Ditto	No. 2 Order. 1928. (Amendment Order). 1931.
No. 128	...	5/3/31	...	Ditto	No. 6 Order. 1931.
No. 171	...	20/3/31	...	Ditto	No. 7 Order. 1931.
No. 553	...	29/6/31	...	Ditto	No. 5 Order. 1929. (Amendment Order). 1931.
No. 555	...	29/6/31	...	Ditto	No. 9 Order. 1931.
No. 556	...	29/6/31	...	Ditto	No. 10 Order. 1931.
No. 557	...	29/6/31	...	Ditto	No. 11 Order. 1931.
No. 640	...	23/7/31	...	Ditto	No. 12 Order. 1931.
No. 554	...	29/6/31	...	Ditto	No. 8 Order. 1931.

## CIRCULARS :—

No. 1173	...	29/1/31	...	Medical Officers of Health restricted from engaging in private practice.
No. 1186	...	30/4/31	...	Cancer VIII.
No. 1194	...	13/4/31	...	Plague Preventive Measures—Examination of Rats.
No. 1208	...	14/7/31	...	Birth Control.
No. 1211	...	4/8/31	...	Canal Boats Act, 1884.
No. 1217	...	21/8/31	...	Ditto Amendment Regulations, 1931.
		16/12/31	...	The Cinema and Children.

## MEMORANDA :—

- L.G.A. 41 ... Medical Officers of Health restricted from engaging in private practice.  
 M.C.W. 153... Birth Control.  
                   Cancer of the Lip, Tongue and Skin.

## MINISTRY OF AGRICULTURE AND FISHERIES :—

- No. 80 ... 13/2/31 ... The Control of Dogs (Amendment) Order, 1931.  
 No. 294 ... 10/4/31 ... Animal—Diseases of Animals.  
 No. 338 ... 18/4/31 ... Ditto.  
 No. 750 ... 8/9/31 ... The Transit of Animals (Amendment) Order, 1931.  
 No. 828 ... 7/10/31 ... The Tuberculosis (Amendment) Order, 1931.  
 Leaflet No. 74 ... Anthrax.
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